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HP. 10.



No. 11040

IN THE

United States Circuit Court of Appeals

FOR THE NINTH CIRCUIT

FIRST NATIONAL BENEFIT SOCIETY,

Appellant,

vs.

MAYNARD GARRISON, Insurance Commissioner of
the State of California, and H. F. RISBROUGH and
MAE BARR LONG, Deputy Insurance Commissioners
of the State of California,

Appellees.

TRANSCRIPT OF RECORD

Upon Appeal from the District Court of the United States
for the Southern District of California,
Central Division

FILED

MAY 31 1945

PAUL P. O'BRIEN,
CLERK

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[Clerk's Note: When deemed likely to be of an important nature, errors or doubtful matters appearing in the original certified record are printed literally in italics; and likewise, cancelled matter appearing in the original certified record is printed and cancelled herein accordingly. When possible an omission from the text is indicated by printing in italics the two words between which the omission seems to occur.]

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NAMES AND ADDRESSES OF ATTORNEYS:

For Appellant:

ROBERT R. WEAVER

448 South Hill St.

EARL BLODGETT

417 South Hill St.

Los Angeles 13, Calif.

For Appellees:

ROBERT W. KENNY,

Attorney General of the State of California

T. A. WESTPHAL, JR.,

Deputy

600 State Building

San Francisco 2, Calif. [1*]

In the District Court of the United States for the
Southern District of California
Central Division

No. 3895-O'C

FIRST NATIONAL BENEFIT SOCIETY,
a Corporation,

Plaintiff,

vs.

MAYNARD GARRISON, Insurance Commissioner of
the State of California, and H. F. Risbrough, Mae
Barr Long, Doe I, Doe II, Doe III, Deputy Insurance
Commissioners of the State of California, and Alvin
J. O'Lein, and Doe IV and Doe V,

Defendants.

COMPLAINT (For Injunction)

Comes Now the plaintiff and for a cause of action
against the defendants and each of them alleges:

I.

That the plaintiff, the First National Benefit Society, is
a non-profit corporation duly organized and existing un-
der and by virtue of the laws of the State of Arizona,
and operating by virtue of Certificate of Authority from
the Arizona Corporation Commission; is duly and regu-
larly examined by the insurance department, a sub-divi-
sion of said Commission, at least once yearly, and au-
thorized by law to issue benefit cer- [2] tificates. Its
principal place of business is in the City of Phoenix,
State of Arizona. That the said plaintiff is a mutual
benefit society engaged exclusively in the business of fur-
nishing benefits upon deaths of its members; that said
plaintiff has members in several States of the United

States including the State of California; that said plaintiff is a mutual non-profit society.

That the plaintiff, the First National Benefit Society, has never maintained an office or agency in the State of California and has never done business in the State of California.

II.

That the said plaintiff has many members in the State of California; that many of them were acquired by application by mail from the member to the home office in Phoenix, Arizona; that many of them were acquired by contract of assumption from California Corporations; that all applications for certificates in the First National Benefit Society are accepted or rejected in the City of Phoenix, Arizona, that all certificates of membership are issued at Phoenix, Arizona, and all premiums, dues and assessments are payable direct to the home office at Phoenix, Arizona.

III.

That the true names of the persons sued herein under the fictitious names of Doe I, Doe II, Doe III, Doe IV, and Doe V, are unknown to plaintiff, and plaintiff asks permission to insert their true names as soon as the same can be ascertained.

IV.

That the defendants, and each of them, are citizens and residents of the State of California; that some of them are residents of this United States Judicial District, to-wit: the Southern District of California, Central Division. [3]

That plaintiff has upon many occasions received inquiries from persons residing in the State of California

in regard to its insurance policies or benefit certificates and has thereupon sent its representatives, also members of the said Society, to call upon persons making such inquiries. That applications have been signed by the said residents of California and thereupon forwarded to the home office for acceptance or rejection. That upon acceptance of the said applications the policies are issued at the home office at Phoenix, Arizona, and mailed direct to the insured with notice to pay all premiums at the home office. That during the month of August, 1944, plaintiff corresponded by mail with the defendant Alvin J. O'Lein of 1561 Santa Ynez Street, Ventura, California. That the said Alvin J. O'Lein forwarded to plaintiff by mail an inquiry card asking for information about plaintiff's insurance policies. That plaintiff gave the address of the said defendant to its representative and member F. O. Robertson who did, on or about the 28th day of August, 1944, call upon the said Alvin J. O'Lein in regard to said insurance policies; that the said Alvin J. O'Lein and his wife made applications to plaintiff for insurance policies in plaintiff's company. That the said applications were forwarded to plaintiff by mail. That they were accepted at Phoenix, Arizona, and the policies were issued and mailed to the address of the said Alvin J. O'Lein, 1561 Santa Ynez Street, Ventura, California. That thereafter the said Alvin J. O'Lein, acting under the instructions and request of the defendant, Maynard Garrison, California insurance commissioner, acting through his deputies, filed a complaint against the said representative F. O. Robertson, and caused a warrant to be issued charging the said representative with selling insurance in the State of California without a license and aiding a non-admitted insurer to transact insurance business in the State of California. [4] That the said F. O. Robertson was ar-

rested upon the said warrant and now stands charged with criminal offense as above set out. That similar transactions have been conducted by the said plaintiff with other residents of the State of California.

That upon many occasions the defendants, Maynard Garrison, acting through his deputies, under claim of right but actually without right and in violation of the commerce clause of the Constitution of the United States and repugnant to the Fourteenth Amendment of the Constitution of the United States, has interfered with the said representatives and has threatened them with prosecution if they persisted in aiding in such transactions. That the said defendants have threatened the arrest of one Garnet J. Reed for aiding in such transactions. That the following persons have been ordered by the said defendants not to assist in such transactions for plaintiff, to-wit: L. F. Cutten, Casey Pippin, Paxton Clark, H. H. Given, Ed Winn, Milton Briles, H. V. Philips, Daniel DeMeo, R. A. Tomkinson, Lillian L. Fiihr, Harry Bates, D. C. Mitchell, H. V. Alger, O. W. Curran, G. N. Wadsworth, George Miller, T. E. Grissell, G. E. McCreery, A. F. Gardner, J. H. Lindgren, George E. Blosser. That the said transactions constitute interstate commerce and the assistance rendered by these agents is but one step in a chain of events constituting an interstate transaction.

That the said defendants have in the past interfered with and threaten to continue in the future their interference with any representatives of plaintiff aiding in such interstate transactions. That defendant has, and if the acts of defendant continue, will suffer great and irreparable injury. That pecuniary compensation would not afford adequate relief. That plaintiff has no plain, speedy or adequate remedy at law as it would involve a multitude of legal actions to determine the rights of agents in each

individual case and in most instances would merely [5] cause the said representative to cease his representation of plaintiff.

That plaintiff is a duly organized corporation in the State of Arizona and is qualified to do a life insurance business in the State of Arizona and is entitled to insure the lives of any persons desiring the contract with it, but that there is no provision for the admission of any such Company in the State of California on any basis whatsoever. That only those foreign companies which transact their life insurance business on the legal reserve basis or fraternal basis can be so qualified. That the State of California has not regulated and has no provision for the regulation of such business but has excluded all foreign companies from transacting such business within its borders but does provide for the regulation of local companies transacting that business and that the defendants have been and are continuing to discriminate against plaintiff and to interfere with its interstate transactions.

And for a Further, Separate, and Second Cause of Action the plaintiff alleges:

I.

The Plaintiff here refers to Paragraph I, II, III and IV, and by reference thereto makes the same a part of this its second cause of action to the same extent as if here set forth in full.

II.

That the defendants under a claim of right, but actually wrongfully and unlawfully did write and orally counsel members of the said First National Benefit Society and did advise said members to sever connections with the said society and forfeit their certificates therein;

that the said defendants advised members of said society that its certificates were "illegal" and [6] that they were "not worth the paper they are written on"; that the said defendants entered upon a campaign of molestation and interference with members of said plaintiff.

That all certificates issued by said plaintiff are legal and authorized by law; that the said statements are false and untrue, and were, by said defendants, known to be false and untrue.

That in the year 1936 the plaintiff filed Bill of Complaint against the then insurance commissioner of the State of California and several of his deputies asking for an injunction against such acts, setting forth in detail many such acts and transactions. That the said action was Equity 860-S of this Court. That after trial of the said action the Court found, among other things, that the defendants had made the said statements, but also found that none of these acts had been done since September 10, 1936, and further found that defendants had not offered nor threatened *the* resume the writing of the letters complained of, derogatory to the plaintiff, and further found that the plaintiff has not been damaged to the extent of Three Thousand Dollars, and that the Court therefore lacked jurisdiction in the matter and entered a dismissal of the said action.

But that the insurance commissioner of the State of California and his deputies have continued and do still continue to interfere with the members of said plaintiff corporation, subsequent to the said date and continuing down to the present time; and that the defendants have written letters to Garlan A. Rogers, Arthur J. Newlove, Mrs. Ider Wood, Mrs. Berta Grow and many others too numerous to set forth herein, disturbing the same mem-

bers and inferring to them that they could not collect on plaintiff's policies in case of loss.

That on September 16, 1941, the California Insurance Commissioner by and through its deputy Harold B. Hass, wrote a [7] letter to Mr. W. K. Plummer, 254 Carroll Street, Sunnyvale, California, in which the following statement was made:

"The First National Benefit Society has tried to get into California through both the Insurance Department and the Federal Courts and has been repulsed each time. Any insurance transaction by any person other than a certificate holder taking place within this State on behalf of that organization is unlawful."

That the said defendants and each of them have upon many occasions too numerous to set forth in full herein, written and verbally counseled the said members to drop their certificates in the society and do now continue to interfere with plaintiff's members within the State of California illegally and without right and have thereby inflicted upon this plaintiff and will continue to so inflict great and irreparable injury.

III.

That the Insurance Commissioner of the State of California and his deputies have continued and do now continue to do and perform the said acts with the intention and purpose of injuries and destroying the business of the said plaintiff. That the said acts of the defendants have continued and will continue and have now damaged the said plaintiff in a sum far in excess of Three Thousand Dollars.

IV.

That the acts and conduct of the said defendants have been frequently repeated and are continuing and will continue for the express purpose of injuring said plaintiff; that their statements regarding the said plaintiff are untrue and were at the time so made, known by them to be false and untrue; that the said certificates of the said First National Benefit Society are valuable and legal; that said defendants are unlawfully and wrongfully interfering with said members and in writing said derogatory statements; that as a result of said acts of the defendants, and each of them, that beneficiaries of members have [8] been deprived of cash benefits on account of lapsed certificates.

V.

That the said acts and conduct of the defendants have resulted, and will continue to result in inflicting upon this plaintiff great and irreparable loss and injury, the exact nature, character and amount of which cannot be definitely ascertained; that pecuniary compensation would not afford adequate relief herein in that it cannot be determined fully what the entire amount and extent of the loss would be, or the exact amount of the loss that the said plaintiff will continue to suffer; that one of the greatest losses to the said members would consist in the weakening of the said organization and thereby impairing the very existence of said society.

VI.

That upon many occasions upon inquiry by a member of plaintiff's Society the said defendants have advised said members to drop their insurance with plaintiff and insure with a California Corporation. That one such letter was written to Mr. George J. Smith, 2220 E. Colo-

rado, Pasadena, California, June 9, 1937, signed by Samuel L. Carpenter, Jr., by Mae Barr Long, which letter contained the following statement:

“If you are interested in securing insurance which will guarantee the payment of your funeral expenses, etc., we would suggest that there are any number of insurance companies which are qualified to operate in this State.”

That said corporation during the past ten years has paid thirty-one hundred separate certificate death claims involving over Seven Hundred Thousand Dollars. That said Society has during the past ten years issued more than seventy thousand joint, family group, and individual certificates, and at the present time cover approximately thirty-five thousand people, many of which people took their policies in the State of Arizona and upon their removal to the State of California or change of residence the said [9] California insurance Commissioner, acting through his deputies, interfered with said people and advised them that their certificates were unlawful and illegal and of no value whatsoever and that they should drop them and insure in a company qualified in the State of California.

VII.

That by reason of the acts, conduct, matters and things aforesaid, plaintiff has been damaged in a sum in excess of Three Thousand Dollars exclusive of interest and costs; that as a result of the said acts of the defendants and each of them as aforesaid, the plaintiff has lost ten thousand of its California members involving an annual dues loss of Two Hundred Forty Thousand Dollars; and based upon the average expectancy of time which such certificates remain in force, it has already been damaged

in the sum of One Million Two Hundred Thousand Dollars. That the plaintiff will continue to be further damaged so long as defendants continue and persist in their acts and conduct as aforesaid; however, the exact nature and amount thereof cannot be ascertained; that the plaintiff does not have a plain, speedy, and adequate remedy at law.

Wherefore, Plaintiff prays judgment that the defendants and each of them be permanently enjoined and restrained from committing the acts complained of; that the Court make an order directing the defendants and each of them to answer and show cause at a time and place appointed by such order, why they and each of them should not be restrained and enjoined during the pendency of this action from doing any of the said acts and things complained of herein; that a temporary restraining order be granted plaintiff, restraining the said defendants from committing said acts pending said hearing; that upon the hearing of said Order to Show Cause a preliminary injunction be granted restraining the defendants, and each of them, from doing any of the said acts [10] during the pendency of this action, and that plaintiff have judgment and damages already suffered in the sum of One Million Two Hundred Thousand Dollars, and for costs and disbursements herein incurred, and for such other and further relief as may be just and proper.

EARL BLODGETT and
ROBERT R. WEAVER,

By: Robert R. Weaver
Attorneys for Plaintiff.

[Verified.]

[Endorsed]: Filed Sep. 23, 1944. [11]

[Title of District Court and Cause.]

ORDER

To the above named defendants: Maynard Garrison, Insurance Commissioner of the State of California and H. F. Risbrough, Mae Barr Long, Doe I, Doe II, Doe III, Deputy Insurance Commissioners of the State of California, and Alvin J. O'Lein, and Doe IV and Doe V.

The above named plaintiff, having filed herein its verified complaint for an Injunction, a copy of which shall be served upon you together with a copy of this Order, and praying for the issuance of an Order to Show Cause why you should not be restrained from doing the acts complained of during the pendency of the said action, and good cause appearing therefor:

You Are Hereby Ordered to appear in the above [12] entitled Court, in Court Room 7, and Judge J. F. T. O'Connor, on the 2d day of October, 1944, at 10 A. M., then and there to show cause, if any you have, why a temporary injunction should not be issued restraining you from doing the acts complained of during the pendency of this action.

Done in open court this 23rd day of Sept., 1944.

PAUL J. McCORMICK

Judge.

[Endorsed]: Filed Sep. 23, 1944. [13]

[Title of District Court and Cause.]

NOTICE OF MOTION TO DISMISS; OR MOTION
FOR MORE DEFINITE STATEMENT

Now come Maynard Garrison, Insurance Commissioner of the State of California, and H. F. Risbrough and Mae Barr Long, Deputy Insurance Commissioners of the State of California, and move the court as follows:

1. The said defendants, both collectively and singly, (each defendant for himself) move the Court to dismiss the Plaintiff's complaint herein and the action as to each alleged cause of action on the ground and for the reason that the above entitled Court lacks jurisdiction over the subject matter of the complaint and the action and the two alleged causes of action therein in [14] that:

- (a) No substantial Federal question is presented;
- (b) The matter in controversy arises under the laws of the State of California;
- (c) Assuming plaintiff to be engaged in interstate commerce, since Congress has not legislated in the field plaintiff has failed to comply with valid regulations of the State of California;
- (d) The State of California has not consented to be sued;
- (e) The amount in controversy is less than \$3,000.00, exclusive of interest and costs.

2. Defendants, both collectively and singly (each defendant for himself), move the Court to dismiss the first cause of action in said complaint, on the ground and for the reason that the above entitled Court lacks jurisdiction over the subject matter of said first cause of action, in those particulars which have been specified in subdivisions (a), (b), (c), (d) and (e) of paragraph 1 hereof.

3. Defendants, both collectively and singly (each defendant for himself), move the Court to dismiss the second cause of action in said complaint, on the ground and for the reason that the above entitled Court lacks jurisdiction over the subject matter of said second cause of action, in those particulars which have been specified in subdivisions (a), (b), (c), (d) and (e) of paragraph 1 hereof.

4. Defendants, both collectively and singly (each defendant for himself), move the Court to dismiss the plaintiff's complaint herein and the action as to each alleged cause of action, on the ground and for the reason that the above entitled Court lacks jurisdiction over the persons and/or over each of the persons who are named as parties in said complaint, in those particulars which have been specified in subdivisions (a), (b), (c), (d), and (e) of paragraph 1 hereof.

5. Defendants, both collectively and singly (each defendant [15] for himself), move the Court to dismiss the first cause of action in said complaint on the ground and for the reason that the above entitled Court lacks jurisdiction over the persons and/or over each of the persons who are named as parties in said complaint, in those particulars which have been specified in subdivisions (a), (b), (c), (d), and (e) of paragraph 1 hereof.

6. Defendants, both collectively and singly (each defendant for himself), move the Court to dismiss the second cause of action in said complaint on the ground and for the reason that the above entitled Court lacks jurisdiction over the persons and/or over each of the persons who are named as parties in said complaint, in those particulars which have been specified in subdivisions (a), (b), (c), (d) and (e) of paragraph 1 hereof.

7. Defendants, both collectively and singly (each defendant for himself), move the Court to dismiss the plaintiff's complaint and the action because the complaint fails to state a claim against defendants, or any of them, upon which relief can be granted.

8. Defendants, both collectively and singly (each defendant for himself), move the Court to dismiss the first cause of action in plaintiff's complaint because the complaint fails to state a claim against defendants, or any of them, upon which relief can be granted.

9. Defendants, both collectively and singly (each defendant for himself), move the Court to dismiss the second cause of action in plaintiff's complaint because the complaint fails to state a claim against defendants, or any of them, upon which relief can be granted.

10. Defendants, both collectively and singly (each defendant for himself), move the Court to dismiss plaintiff's complaint and the action because the complaint does not show that the amount in controversy exceeds \$3,000.00, exclusive of interest and costs. [16]

11. Defendants, both collectively and singly (each defendant for himself), move the Court to dismiss the first cause of action in said complaint, on the ground and for the reason that the said first cause of action does not show that the amount in controversy exceeds \$3,000.00, exclusive of interest and costs.

12. Defendants, both collectively and singly (each defendant for himself), move the Court to dismiss the second cause of action in said complaint, on the ground and for the reason that the said second cause of action does not show that the amount in controversy exceeds \$3,000.00, exclusive of interest and costs.

13. Without prejudice to the foregoing motion, and for the consideration of the Court in the event that the action is not dismissed, the defendants, and each of them, move the Court for a more definite statement of the two causes of action of the complaint because of the following defects appearing therein, namely:

The two alleged causes of action of the complaint contain many general and indefinite statements of the pleader. Details should be furnished as to:

- (a) In what capacity F. O. Robertson "called upon" Alvin J. O'Lein on or about August 28, 1944, and what transpired at said meeting. This is in connection with the allegation contained on page 3, lines 11-32, of the complaint;
- (b) Where and with whom and what "similar transactions have been conducted" in California as alleged in lines 3 and 4, page 4, of the complaint;
- (c) When, where and in what manner defendants have acted as alleged in lines 5 to 11, page 4, of the complaint;
- (d) When and where and what defendants have threatened the arrest of Garnet J. Reed, as alleged in lines 12 and 13, page 4, of the complaint;
- (e) The nature of "the assistance rendered by these agents", referred to in lines 21 and 23, page 4 of the complaint;
- (f) Where and when and in what manner defendants have "interfered with and threatened to continue in the future their interference" with what representatives of plaintiff, as alleged in lines 24 to 28, page 4, of the complaint; [17]

- (g) How and in what manner plaintiff has or will suffer great and irreparable injury, alleged in lines 28 and 29, page 4, of the complaint;
- (h) When, where and in what manner and what defendants committed the acts alleged in lines 27 to 32, page 5, and lines 1 to 7, page 6, of the complaint;
- (i) How, when and in what manner the acts were committed alleged in lines 22 and 23, page 6, of the complaint;
- (j) How, when and in what manner defendants have committed the acts alleged in lines 7 to 13, page 7, of the complaint;
- (k) How plaintiff has been damaged in the sum exceeding \$3,000.00, as alleged in lines 15 to 21, page 7, of the complaint;
- (l) What acts, conduct and statements of defendants are complained of, as alleged in lines 23 to 31, page 7, of the complaint;
- (m) What acts and what conduct are complained of in lines 3 to 13, page 8, of the complaint;
- (n) What occasions plaintiff refers to in lines 15 to 18, page 8, of the complaint;
- (o) What people and the time of the alleged interference of which plaintiff complains, as alleged in lines 1 to 5, page 9, of the complaint;
- (p) How and in what manner plaintiff has been damaged, as alleged in lines 7 to 19, page 9, of the complaint.

Said motions are based upon the papers, files and records in the above case, the attached Memorandum of Points and Authorities, and the Notice of Hearing being given herewith.

Dated: October 30, 1944.

ROBERT W. KENNY,

Attorney General

T. A. WESTPHAL, JR.,

Deputy Attorney General

Attorneys for Defendants, Maynard Garrison, Insurance
Commissioner of the State of California, H. F. Ris-
brough and Mae Barr Long, Deputy Insurance Com-
missioners of the State of California,

600 State Building,

San Francisco 2, California. [18]

NOTICE OF MOTION

To Earl Blodgett and Robert R. Weaver, Attorneys for
Plaintiff, 448 South Hill Street, Los Angeles 13,
California.

Please take notice that the undersigned will bring the
above motion on for hearing before the above entitled
Court in the courtroom of the Honorable J. F. T. O'Con-
nor, one of the Judges of said Court, on the 6th day of
November, 1944, at 10:00 o'clock A. M. in the forenoon
of that date, or as soon thereafter as Counsel may be
heard.

ROBERT W. KENNY

Attorney General

T. A. WESTPHAL, JR.

Deputy Attorney General

Attorneys for Defendants, Maynard Garrison, Insurance
Commissioner of the State of California, H. F. Ris-
brough and Mae Barr Long, Deputy Insurance Com-
missioners of the State of California

600 State Building,

San Francisco 2, California.

[Endorsed]: Filed Nov. 1, 1944. [19]

[Minutes Monday, November 6, 1944.]

Present: The Honorable J. F. T. O'Connor, District Judge.

This cause coming on for hearing on motion of defendant, filed November 1, 1944, to dismiss, or motion for a more definite statement; and for hearing on motion of plaintiff for a temporary injunction, pursuant to order filed September 23, 1944; Earl Blodgett, Esq., appearing for the plaintiff; T. A. Westphal, Jr., Esq., appearing for the defendant; A. H. Bargion, Court Reporter, being present and reporting the proceedings; Attorney Westphal makes a statement. Attorney Blodgett makes a statement. At 11:33 A. M. it is ordered that this matter be continued to 2 P. M. today.

Court reconvenes herein at 2:03 P. M.; all present as before.

Attorney Westphal argues to the Court. The Court makes a statement. Attorney Blodgett argues. It is ordered that motions stand submitted on briefs to be filed 20 x 20 x 5, defendant to file opening brief. [34]

[Minutes Friday, December 29, 1944.]

Present: The Honorable J. F. T. O'Connor, District Judge.

Good cause appearing therefor, it is by the Court ordered that the motion of the defendants for a dismissal of this case, heretofore taken under submission on November 6, 1944, be granted, in accordance with opinion of the Court, now in the course of preparation, which will be filed next week. [35]

[Title of District Court and Cause.]

OPINION OF THE COURT

Earl Blodgett and Robert R. Weaver, of Los Angeles, California, and Phoenix, Arizona, counsel for the Plaintiff.

Robert W. Kenny, Attorney General of the State of California, and T. A. Westphal, Jr., Deputy Attorney General, San Francisco, California, counsel for the Defendants.

O'Connor, J. F. T., Judge.

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In the above entitled action, the First National Benefit Society, a non-profit corporation organized and existing under the laws of the State of Arizona, the plaintiff herein, has filed in this court, under date of September 23rd, 1944, a complaint for an injunction against Maynard Garrison, Insurance Commissioner of the State of California and H. F. Risbrough, [36] Mae Barr Long and three Does as Deputy Insurance Commissioners of

the State of California and Alvin J. O'Lein and Does IV and V, individually, alleging that it is a non-profit corporation duly organized and existing under and by virtue of the laws of the State of Arizona and operating by virtue of a certificate of authority from the Arizona Corporation Commission, that it is duly and regularly examined by the insurance department, a subdivision of the said Commission, at least once yearly, and is authorized by law to issue benefit certificates and is engaged exclusively in the business of furnishing benefits upon the death of its members, with its principal place of business in the City of Phoenix, Arizona, but that it has never maintained an office or agency in the State of California and has never done business in the State of California. Plaintiff further alleges that it has members in several States of the United States including many members in the State of California, and that many of them were acquired by application by mail from the member to the home office in Phoenix, Arizona; that many of them were acquired by contract of assumption from California corporations; that all applications for certificates in the plaintiff corporation are accepted or rejected in the city of Phoenix, Arizona; that all certificates of membership are issued at Phoenix, Arizona, and all premiums, dues and assessments are payable directly to the home office at Phoenix, Arizona. The complaint, after alleging the requisite jurisdictional facts, continues:

"That plaintiff has upon many occasions received inquiries from persons residing in the State of California in regard to its insurance policies or benefit certificates and has thereupon sent its representatives, also members of the said Society, to call upon persons making such inquiries: [37] that applications have been signed by the said residents of California and thereupon forwarded to

the home office for acceptance or rejection; that upon acceptance of the said applications the policies are issued at the home office at Phoenix, Arizona, and mailed directly to the insured with notice to pay all premiums at the home office; . . . that upon many occasions the defendant, Maynard Garrison, acting through his deputies, under claim of right but actually without right and in violation of the commerce clause of the Constitution of the United States, and repugnant to the Fourteenth Amendment of the Constitution of the United States, has interfered with the said representatives and has threatened them with prosecution if they persisted in aiding in such transactions."

The complaint then gives the names of persons who have been ordered not to assist in such transactions for plaintiff, which transactions, according to the plaintiff, constitute interstate commerce and the assistance rendered by these agents is but one step in a chain of events constituting an interstate transaction. The complaint further alleges that said defendants in the past have interfered with, and threaten to continue in the future their interference with, any representatives of plaintiff aiding in such interstate transactions to the great and irreparable injury to plaintiff; that pecuniary compensation would not afford adequate relief and that plaintiff has no plain, speedy or adequate remedy at law as it would involve a multitude of legal actions to determine the rights of agents in each individual case.

Further, the complaint continues, that plaintiff is qualified to do a life insurance business in Arizona; *that there is no provision for the admission of any such company in the State of California on any basis whatsoever; that only those foreign companies which transact their life*

insurance [38] business on the legal reserve basis or fraternal basis can be so qualified; that the State of California has not regulated and has no provision for the regulation of such business but has excluded all foreign companies from transacting such business within its borders but does provide for the regulation of local companies transacting that business and that the defendants have been and are continuing to discriminate against plaintiff and to interfere with its interstate transactions. (Italics supplied.)

Further continuing: "That the defendants under a claim of right, but actually wrongfully and unlawfully did write and orally counsel members of the said First National Benefit Society, and did advise said members to sever connections with the said society and forfeit their certificates therein; that said defendants advised members of said society that its certificates were 'illegal' and that they were 'not worth the paper they were written on', which statements are false and untrue, and that said defendants entered upon a campaign of molestation and interference with members of said plaintiff; and that plaintiff has already been damaged in the sum of one million two hundred thousand dollars."

While the complaint goes further into detail, it is believed that the foregoing enumerated facts, as alleged in the complaint, reflect a comprehensive picture of the plaintiff's contention, and will be a sufficient predicate for the fundamental principles of constitutional law which the court will apply thereto in rendering a decision in this case. The defendant Alvin J. O'Lein, sued individually, has been voluntarily dismissed from the case.

To this complaint the defendants, not as individuals, for they are not being sued as individuals, but in their legal capacities, have filed a motion to dismiss or a

motion [39] for a more definite statement under the Federal Rules of Civil Procedure, together with their points and authorities. Counsel for the plaintiff has filed his points and authorities in opposition thereto, the matter came before the court for argument and was thereupon submitted on briefs to be filed. These briefs have been filed, and the motion of the defendants to dismiss or for a more definite statement is now before the court for decision; and, for the purpose of rendering an opinion in this case, it must be assumed by the court that all of the allegations in the complaint for injunction and damages are true.

Counsel for both sides have been exceedingly helpful to the court in furnishing extensive points and authorities and briefs on this very important subject which have been quite illuminating. As the court views the facts, this case can be readily determined on three basic principles of constitutional law, namely, (1) the commerce clause of the Federal Constitution, (2) the police power, and (3) the right of a person to sue one of the United States without its consent, under the Eleventh Amendment to the Federal Constitution. The court takes judicial notice that insurance is now interstate commerce under the commerce clause of the Federal Constitution, (Article I, Sec. 8, Clause 3) in accordance with the Supreme Court decision in the case of *United States v. South-Eastern Underwriters Assn.*, 322 U. S. 533; 64 Sup. Ct. Rep. 1162; 88 L. Ed. 1082, subject to legislation by the National Congress and that thus far the National Congress has not passed any legislation on this phase of our national life as a result of the foregoing decision. There being no insurance cases which have been decided subsequent to this decision that would be illuminative to the court in deciding this case, it will be necessary, in reaching a decision, to deal with analogous situations.

As to the status of the plaintiff in California, from the [40] standpoint of the Insurance Commissioner, Maynard Garrison, counsel for the defendants in their opening brief have this to say:

“Plaintiff states in its allegations that it is a mutual non-profit benefit insurance company. Its character is clarified by plaintiff in the statement contained on page 8, lines 21-24, of its Points and Authorities in opposition to Defendant’s motion to dismiss and/or motion for more definite statement that Chapter IX of the California Insurance Code being Sections 10810 to 10940 provide for California companies on a stipulated premium plan and are similar to the plan of plaintiff, * * * This description, and particularly the reference to Section 10810, can only mean that plaintiff issues death benefit certificates under a stipulated premium plan, with a right of assessment against certificate holders.

Such a plan of operation was permitted in California, both as to foreign insurance and domestic insurers, prior to 1939, provided that certain reserves were maintained (Calif. Stats. 1935, Chap. 282.) Under the provisions of California statutes of 1939, Chapter 327, such companies, known as Chapter 9 companies, organized prior to 1939 were and are permitted to continue in business in this State, but Section 10818 of the Insurance Code forbids any new insurer to be organized or admitted under that chapter on and after January 1, 1940, with certain exceptions not here relevant.

This ban on Chapter 9 companies applies equally to foreign and to domestic companies so that plaintiff is not discriminated against as alleged on page 5, lines 15-17 of its complaint.

There is, however, no ban on foreign companies or plaintiff from transacting insurance in California if they meet California standards. Plaintiff can be licensed in California if it will comply with the California Insurance Code, and particularly Section 10510. Section 10510 provides:

‘An incorporated life insurer issuing policies on the reserve basis shall not transact life insurance in this State unless it has a paid-in capital of at least two hundred thousand dollars (\$200,000).’

Paid-in capital is defined in Section 36 in part as follows:

‘(a) In the case of a foreign mutual insurer not issuing or having outstanding capital stock, the value of its assets in excess of the sum of its liabilities for losses reported, expenses, taxes, and all other indebtedness and reinsurance of outstanding risks as provided by law. Such foreign mutual insurer shall not be admitted, however, unless its paid-in capital is composed of ‘available cash assets amounting to at least two hundred thousand dollars (\$200,000).’ [41]

In other words, in California, foreign or domestic life companies cannot do business in this State unless this reserve requirement is met. There are no exceptions except as to companies existing and doing business in California prior to the enactment of present laws. The policy behind the law is, of course, that experience has shown that without such reserves and surplus a mutual benefit company doing business on the stipulated premium plan with right of assessment is not adequately safeguarded to insure that money will be available to pay death benefits. However, California permits such con-

panies, foreign or domestic, operating in California prior to January 1, 1940, to continue in order to protect contracts written prior to that date. It is clear that California does not discriminate against foreign companies."

In order that plaintiff's position may likewise not be misunderstood there is also set out the reasons for its contention that it is entitled to transact an insurance business in California relying, as it does, upon the recent Supreme Court decision in the case of *United States v. South-Eastern Underwriters Assn.*, 322 U. S. 533; 64 Sup. Ct. Rep. 1162; 88 L. Ed. 1082, without the necessity of complying with the insurance laws of the State of California. I quote:

"Now, after seventy five years, the Supreme Court, in applying the Sherman Anti-Trust Act to the South Eastern Underwriters Association, has reversed the old case of *Paul vs. Virginia*, and held that 'insurance is commerce and where conducted across state line is interstate commerce.'

It is then, the effect which this decision may have upon the right of the States to regulate this field of interstate commerce which is involved in this case . . .

This case is not, as counsel says, 'an attempt by a foreign insurance company to transact business in the State of California without meeting the standards of safety set by that State', but it is the presentation of the question which everyone connected with the insurance business now knows must be presented to the Supreme Court, and that is can the State of California or any State reach out across its state lines and regulate the corporate structure,

the actuarial standard, and even the bookkeeping basis as well as complete regulation of such foreign companies' business in every state in the Union, for the privilege of transacting an interstate business with the citizens of California or the state attempting to so regulate, even though such business may be small in comparison to the company's business elsewhere. [42]

This case does not present the question as to whether or not the laws of California will be nullified but as to whether the State of California can nullify the laws of every other state in the Union if the companies organized in those states are to do an interstate business with the citizens of that state.

We are not contending, as counsel seems to intimate, that all state legislation is nullified.

This entire matter revolves around the question as to whether or not the plaintiff must obtain the consent of the State of California to transact an interstate business with its citizens when that consent requires the conforming of its entire business, which is spread over every state in the Union, to the regulations of the State of California. Many regulatory measures could be enacted by a State for the protection of its citizens, without the right to require a foreign corporation to obtain the states' consent to transact an interstate business with its citizens . . .

Counsel then attempts on the same page to inject into (the) situation of the insurance business a requirement of an incorporated life insurer issuing policies on the reserve plan the requirement of a \$200,000 capital which taken together with the following page indicates that it is a requirement for

mutual benefit societies. As a matter of fact the section, 10510 applies to legal reserve life insurance companies and not to mutual benefit companies. The laws of no state in the Union require a \$200,000 capital for mutual benefit societies. The California law which counsel's arguments themselves indicate have created a monopoly for local California companies now in existence require a deposit of \$25,000.00 which is all of the capital requirement. A requirement which this plaintiff could meet many times over. In fact, there is no showing or contention before this court that plaintiff does not meet all the requirements which counsel has indicated are necessary except the one of asking the State of California for permission to do an interstate business with its citizens. Counsel says it is the policy of the law that the \$200,000 reserve requirement be met. He does not know what reserve requirement this plaintiff can or does meet. He only knows that it has transacted business across state lines with its citizens which does not constitute doing an intrastate business in California, without asking the permission of the State of California.

The very sections which counsel cites as setting up these requirements are a part of the Chapters setting out, among others, requirements of investment values in the insurance policies provided for in these Chapters which make the larger reserve necessary. Furthermore the laws of the State of Arizona under which plaintiff is transacting its business, Sections (Amended 1943) 53-601 of the 1939 Arizona Code prohibit plaintiff from issuing such policies so that all counsel is saying is that if plaintiff will ignore the [43] laws of the state under which it is or-

ganized and in fact if it will violate those laws and comply with laws of California enacted for entirely different types of companies it can be admitted to do business in California.”

The court deems it advantageous to set out the contention of each side, in extenso, as to the construction to be placed upon the California code sections in view of the fact that counsel are in disagreement thereon; but the court does not consider a conciliation necessary on this particular point for the fundamental question for solution is whether the State of California, under its police power, and consonantly with the decision of the Supreme Court in *United States vs. South-Eastern Underwriters Association, et al.* (*supra*) holding that insurance is interstate commerce, can still prohibit the plaintiff from conducting an insurance business in California without complying with its local laws? The court prefers to decide this issue on broad general principles of constitutional law. Major continet in se minus. (C. J. 38, p. 339.)

Status of law prior to the decision of the Supreme Court of the United States in the case of *United States vs. South-Eastern Underwriters Assn.*, 322 U. S. 533; 64 Sup. Ct. Rep. 1162; 88 L. Ed. 1082.

Prior to the decision of *United States v. South-Eastern Underwriters Assn.*, (*supra*) decided June 5th, 1944, the business of insurance was not deemed to be commerce and a State could exclude foreign insurance companies or prescribe the terms and conditions under which

they could do business; /(1)/ therefore these prior authorities are of no assistance to the court, but the case of *United States vs. South-Eastern Underwriters Assn.* (supra) which was a criminal prosecution of a group of fire insurance companies under the Sherman Antitrust Act, overthrew this line of decisions of seventy five years' standing and decided for the first time that in- [44] surance is interstate commerce and the case before the court will have to be decided on that basis.

Plaintiff undoubtedly would have this court believe that as a result of that decision the plaintiff is now free for the first time to transact its insurance business in California unmolested by the laws of this State, even though the National Congress has not legislated upon the subject of insurance, of which fact this court can take judicial notice. Plaintiff contends, inferentially at least, that the police power of the State is now ineffectual as a prohibition thereof, otherwise it would not be bringing this suit for an injunction and damages. With this assumption the court cannot agree, and the case of *United States vs. South-Eastern Underwriters Assn.*, (supra) affords no ground for taking this position.

(1) *Paul v. Virginia*, 8 Wall. 168 (1869); See also *Liverpool & L. Life F. Ins. Co. v. Oliver*, 10 Wall. 566 (1871); *Fire Assn. of Philadelphia v. New York*, 119 U. S. 110. (1886); *Hooper v. California*, 155 U. S., 648, 655 (1895); *Noble v. Mitchell*, 164 U. S. 367, (1896); *Allgeyer v. Louisiana*, 165 U. S. 578, (1897); *New York L. Ins. Co. v. Cravens*, 178 U. S. 389. (1900); *Nutting v. Massachusetts*, 183 U. S. 553, 556, (1902); *Hartford F. Ins. Co. v. Perkins*, 125 Fed. 502 (1903), appeal dismissed 196 U. S. 643, (1905); *Security Mut. L. Ins. Co. v. Prewitt*, 202 U. S. 246 (1906); *National Union F. Ins. Co. v. Wanberg*, 260 U. S. 71, (1922); *Bothwell v. Buckbee-Mears Co.*, 275 U. S. 274 (1927); *New York L. Ins. Co. v. Deer Lodge County*, 231 U. S. 495 (1914).

Mr. Justice Black, who wrote the majority opinion of the court said:

"Another reason advanced to support the result of the cases which follow *Paul v. Virginia* has been that, if any aspects of the business of insurance [45] be treated as interstate commerce, 'then all control over it is taken from the States and the legislative regulations which this Court has heretofore sustained must be declared invalid' (*New York Life Ins. Co. v. Deer Lodge County*, 231 U. S. 495, 509). Accepted without qualification, that broad statement is inconsistent with many decisions of this court. It is settled that, for Constitutional purposes, certain activities of a business may be intrastate and therefore subject to state control, while other activities of the same business may be interstate and therefore subject to federal regulation (see e. g. *Crutcher v. Kentucky*, 141 U. S. 47, 59-61; *Atlantic Refining Co. v. Virginia*, 302 U. S. 22, 26; *McGoldrick v. Berwind-White Co.*, 309 U. S. 33). *And there is a wide range of business and other activities which, though subject to federal regulation, are so intimately related to local welfare that, in the absence of Congressional action, they may be regulated or taxed by the states* (italics supplied) (2)

In other words, Mr. Justice Black did not deny that under the interstate commerce clause of the Federal Constitution, in the wide range of business and other activities,

(2) See *Gibbons v. Ogden*, 9 Wheat 1, 200, 203-210; *Willson v. Black Bird Creek Marsh Co.*, 2 Pet. 245, 250-252; *License Cases*, 5 How. 504, Opinion of Mr. Chief Justice Taney, 578-586; *Cooley v. Board of Wardens*, 12 How. 299, 318-321; *Kelly v. Washington*, 302 U. S. 1, 9-10. Cf. *Sturges v. Crowninshield*, 4 Wheat, 122, 192-196; *Houston v. Moore*, 5 Wheat 1, Opinion of Mr. Justice Story, 45-50.

they are so intimately related to local welfare that, in the absence of Congressional action, they may be regulated or taxed by the States. In the present case for decision, however, taxation is not involved and, therefore, will not be discussed.

The defendants must necessarily concede that insurance is now interstate commerce in view of the decision of this Supreme Court in the aforementioned case of *United States v. South-Eastern Underwriters Assn.*, 322 U. S. 533; 64 Sup. Ct. Rep. 1162; 88 L. Ed. 1082, and the court will assume that fact for all purposes, but they contend that, under the police power of the State of California, and until Congress has legislated on the subject of insurance, the [46] laws of California regulating the admission of foreign insurance companies to transact business in this State still control, so the exploration of the court into the realm of law will necessarily be along these lines.

Police power of the States.

What is the police power? According to the tenth amendment to the Constitution of the United States, "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people," and the police power of the States is reserved in the Constitution itself, made all the more emphatic, however, by this Amendment.

"The reservation to the States respectively can only mean the reservation of the rights of sovereignty which they respectively possessed before the adoption of the Constitution of the United States and which they had not parted from by that instrument." (*Gordon v. United States*, 117 U. S. 697, 705 (1864); See

also *States ex rel. Turner v. Williams*, 194 U. S. 279, 295 (1904); *United States v. Butler*, 297 U. S. 1, (1936).)

"It is a familiar rule of construction of the Constitution of the Union that the sovereign powers vested in the State governments by their respective constitutions, remained unaltered and unimpaired, except so far as they were granted to the Government of the United States. That the intention of the framers of the Constitution in this respect might not be misunderstood, this rule of interpretation is expressly declared in the tenth article of the amendments." (*Buffington (Collector) v. Day*, 11 Wall. 113, 124, (1871); "and such article added nothing to the instrument as originally ratified and has no limited and special operation upon the people's delegation by article V of certain functions to the Congress," (*United States v. Sprague*, 282 U. S. 716, 733, (1931).

". . . a State has the same undeniable and unlimited jurisdiction over all persons and things, within its territorial limits, as any foreign nation; where that jurisdiction is not surrendered or restrained by the Constitution of the United States. That, by virtue of this, it is not only the right, but the bounden and solemn duty of a State, to advance the safety, happiness, and prosperity of its people, and to provide for its general welfare, by any and every act of legislation, which it may deem to be conducive to these ends; where the power over the particular subject, or the manner of its exercise is not surrendered or restrained in the manner just stated. That all [47] those powers which relate to merely municipal legislation, or what may, perhaps, more properly

be called internal police, are not thus surrendered or restrained; and that, consequently, in relation to these, the authority of a State is complete unqualified, and exclusive." (New York v. Miln, 11 Pct. 102, 138, (1837).

"The Fourteenth Amendment does not limit the subjects upon which the police power of the State may be exerted." (Minneapolis & St. L. R. Co. v. Beckwith, 129 U. S. 26, (1889); Davis v. Massachusetts, 167 U. S. 43, (1897). See also Sanitary District v. United States, 266 U. S. 405. 427, (1925), citing Texas & N. O. R. Co. v. Miller, 221 U. S. 408, 414, (1911); Atlantic Coast Lines R. Co. v. Goldsboro, 232 U. S. 548, 558, (1914); Denver & R. C. E. Co. v. Denver, 250 U. S. 241, 244, (1919).

"It is thoroughly established that the inhibitions of the Constitution upon the deprivation of property without due process of law by the States are not violated by the legitimate exercise of legislative power in securing the public safety, health and morals." (New York & N. E. R. Co. v. Bristol, 151 U. S. 556, 567, (1894). See also Barbier v. Connolly, 113 U. S. 27, (1885); Ex parte Kemmler, 136 U. S. 436, (1890); Ex parte Converse, 137 U. S. 624 (1891); Giozza v. Tiernan, 148 U. S. 657, (1893); Howard v. Kentucky, 200 U. S. 164, (1906).

"The police power of a State embraces regulations designed to promote the public convenience or the general prosperity as well as those to promote public safety, health, or morals, and is not confined to the suppression of what is offensive, disorderly, or unsanitary, but extends to what is for the greatest

welfare of the State. (*Bacon v. Walker*, 204 U. S. 311 (1907). See also *California Reduction Co. v. Sanitary Reduction Works*, 199 U. S. 306, 318, (1905); *Chicago B. & Q. R. Co. v. Illinois ex rel. Grimwood*, 200 U. S. 561, 592 (1906); *Western Turf Asso. v. Greenburg*, 204 U. S. 359, 363 (1907); *House v. Mayes*, 219 U. S. 270, (1911); *Chicago B. & Q. R. Co. v. McGuire*, 219 U. S. 549, 568, 569, (1911); *Eubank v. Richmond*, 226 U. S. 137, (1912); *Schmidinger v. Chicago*, 226 U. S. 578 (1913); *Sligh v. Kirkwood*, 237 U. S. 52, 58-59 (1915); *Chicago & Alton R. Co. v. Tranbarger*, 238 U. S. 67, (1915); *Nebbia v. New York*, 291 U. S. 502 (1934); *Near v. Minnesota ex rel. Olson*, 283 U. S. 697, 707, (1931); *Nashville, C. & St. L. R. Co. v. Walters*, 294 U. S. 405 (1935)."

Laws which are passed by the States and in the exertion of their police power, not in conflict with laws of the National Congress upon the same subject, *and indirectly and re-affecting interstate commerce*, (italics supplied) are never- [48] theless valid laws. (3).

There can be no question but that the State has the right, under its Police Power, to interfere with interstate commerce.

"There is an exception to the commerce clause of the Constitution in favor of the police power of the States. That power is sufficient to enable the states to provide for the security of the lives, health, and comfort of its citizens, and as a part of that power the states may regulate or restrict the sale of ar-

(3) *New York ex rel. Silz v. Hesterberg*, 211 U. S. 31, 41, (1908), citing *Missouri K. & T. R. Co. v. Haber*, 169 U. S. 613 (1898); *Pennsylvania R. Co. v. Hughes*, 191 U. S. 477, (1903); *Asbell v. Kansas*, 209 U. S. 251, (1908).

ticles deemed injurious to the health or morals of the community. But in exercising this power the states cannot impose taxes on persons passing through the state, nor upon property imported, so long as it is in the original package, and no regulation can be made directly affecting interstate commerce. (*Moog v. States*, 41 So. 166, 168; 145 Ala. 75, citing *Robbins v. Taxing Dist. Shelby County*, 7 S. Ct. 592; 120 U. S. 489; 30 L. Ed. 694.)

The police power, however, has its limits and must stop when it encounters the prohibitions of the Federal Constitution, (4). The police power is the least limitable of the exercises of government, (5); and its limitations are hard to define, (6); are not susceptible of circumstantial precision, (7); cannot be determined by any formula, (8); and must always be determined with appropriate regard to the particular subject of its exercise, (9). [49]

Though obligations of contracts must yield to a proper exercise of the police power, and vested rights cannot inhibit the proper execution of the power, it must be

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- (4) *Eubank v. Richmond*, 226 U. S. 137 (1912); *Southern R. Co. v. Virginia*, 290 U. S. 190 (1933); *Panhandle Eastern Pipe Line Co. v. State Highway Commission*, 294 U. S. 613, 622 (1935).
 - (5) *Hadacheck v. Sebastian*, 239 U. S. 394 (1915); *Hall v. Geiger-Jones Co.*, 242 U. S. 539 (1917).
 - (6) *Sligh v. Kirkwood*, 237 U. S. 52, 58-59 (1915).
 - (7) *Eubank v. Richmond*, 226 U. S. 137, 142, (1912). *Erie R. Co. v. Williams*, 233 U. S. 658, 699, (1914); *Panhandle Eastern Pipe Line Co. v. State Highway Commission*, 294 U. S. 613, 622 (1935).
 - (8) *Hudson County Water Co. v. McCarter*, 209 U. S. 349. (1908).
 - (9) *Near v. Minnesota ex rel. Olsen*, 283 U. S. 697, 707, (1931).

exercised for an end which is in fact public and the means adopted must be reasonably adapted to the accomplishment of that end and must not be arbitrary or oppressive, (10). The police power may be exerted, when otherwise the effect may be to invade rights guaranteed by the Fourteenth Amendment, only when such legislation bears a real and substantial relation to the public health, safety, morals, or some other phase of the general welfare, (11). The general rule is that if regulation goes too far it will be recognized as a taking for which compensation must be paid, (12).

Each exertion of the police power has the support of the presumption that it is an exercise in the interest of the public, and that there are facts justifying its specific exercise. (*Erie R. Co. v. Williams*, 233 U. S. 685, 699, (1914). The presumption attaches alike to statutes, municipal ordinances, and orders of administrative bodies. (*Pacific States Box & Basket Co. v. White*, 296 U. S. 176, (1935).

While it is the duty of the Federal courts to see to it that the constitutional rights of the citizen are not infringed by the State, they should not strike down an enactment or regulation adopted by the State under its police power unless it be clear that the declaration of public policy contained in the statute is plainly in violation of the Federal Constitution, (13). *The legislation, when dealing with a subject within the police power, must be upheld unless shown to be clearly unreasonable, ar-*

(10) *Treigle v. Acme Homestead Asso.* 297 U. S. 189, 197, (1936),

(11) *Ligget (Louis K.) Co. v. Baldridge*, 278 U. S. 105, 111-112 (1928).

(12) *Pennsylvania Coal Co. v. Mahon*, 260 U. S. 393, (1922).

(13) *Broadnax v. Missouri*, 219 U. S. 285, 292, (1911);

bitrary, or dis- [50] *criminatory*, (italics supplied) (14). The broad words of the Fourteenth Amendment are not to be pushed to a drily logical extreme, and the courts will be slow to strike down as unconstitutional legislation enacted under the police power. (15).

It is well established that when a State exerting its recognized authority undertakes to suppress what it is free to regard as a public evil, it may adopt such measures having reasonable relation to that end as it may deem necessary in order to make its action effective, (16). Reasonableness is the test of police power, not scientific precision. (17). A regulation will not be declared invalid because a court may regard it as ineffectual, or harsh in particular instances or in aid of an objectionable policy. (18).

Where legislative action is within the scope of the police power, fairly debatable questions as to its reasonableness, wisdom, and propriety are not for the determination of courts, but for that of the legislative body on which rests the duty and responsibility of decision. (19). [51]

(14) *Hadacheck v. Sebastian*, 239 U. S. 394, (1915); *Cusack (Thomas) Co. v. Chicago*, 242 U. S. 526, (1917).

(15) *Noble State Bank v. Haskell*, 219 U. S. 104, (1911).

(16) *Purity Extract & Tonic Co. v. Lynch*, 226 U. S. 192, 201, (1912);

(17) *Sproles v. Binford*, 286 U. S. 374, (1932).

(18) *Bayside Fish Flour Co. v. Gentry*, 297 U. S. 422, (1936).

(19) *Standard Oil Co. v. Marysville*, 279 U. S. 582, 584 (1929), citing *Zahn v. Board of Public Works*, 274 U. S. 325, 328, (1927); *Hadacheck v. Sebastian*, 239 U. S. 394, 408-412, 413-414, (1915); *Euclid v. Ambler Realty Co.* 274 U. S. 365, 388, (1926); *Jacobson v. Massachusetts*, 197 U. S. 11, 30 (1905); *Laurel Hill Cemetery v. San Francisco*, 216 U. S. 358, 365, (1910); *Cusack (Thomas) Co. v. Chicago*, 242 U. S. 526, 530, (1917); *Price v. Illinois*, 238 U. S. 446, 451, (1915). See also *Purity Extract & Tonic Co. v. Lynch*, 226 U. S. 192, 201-202 (1912); *Erie R. Co. v. Williams*, 233 U. S. 685, 704, (1914).

Tradition and habits of the community count for more than logic in determining the constitutionality of laws enacted for the public welfare under the police power. (20). The fact that a practice is of ancient standing in a State is a reason for holding it unaffected by the Fourteenth Amendment. (21); and the amendment does not override public rights, existing in the form of servitudes or easements which are held by the courts of a State to be valid under its constitution and laws. (22).

A statute is not invalid under the Constitution because it might have gone farther than it did, or because it may not succeed in bringing about the result that it tends to produce. (*Roschen v. Ward*, 279 U. S. 337, (1929).) When a state legislature has declared that, in its opinion, the policy of the State requires a certain measure, its action should not be disturbed by the courts under the Fourteenth Amendment unless they can clearly see that there is no reason why the law should not be extended to classes left untouched. (*Williams v. Arkansas*, 217 U. S. 79, (1910).)

The Commerce Clause (Article I. Sec. 8. Clause 3,
United States Constitution.

In contrast to the authority of the State, under its inherent police power, to regulate its internal affairs, which power has never been delegated to the Federal government, either expressly or by implication, we have

(20) *Laurel Hill Cemetery v. San Francisco*, 216 U. S. 358, (1910). See also *Plessy v. Ferguson*, 163 U. S. 537, (1896).

(21) *Jackman v. Rosenbaum Co.* 260 U. S. 22, (1922).

(22) *Eldridge v. Trezevant*, 160 U. S. 452, 468, (1896); *Vidalia v. McNeely*, 274 U. S. 676, (1927); see also *St. Anthony Falls Water Power Co. v. Board of Water Commissioners*, 168 U. S. 349, (1897).

an express power given to Congress "to regulate commerce with foreign nations, and among the several States, and with the Indian Tribes" [52] (Article I, Sec. 8, Clause 3, of the Federal Constitution); and, as insurance has now been judicially determined to be interstate commerce, the question that presents itself is this: Just how far have the States, under their police power been divested of authority to make laws for the health, protection and happiness of their citizens in the regulation of insurance companies, bearing in mind that, as of this date, no federal legislation has been passed on this subject.

In general, it may be said that Congress, under the commerce clause of the federal constitution, has the power to occupy, by legislation, the whole field of interstate commerce (*Champion v. Ames* (Lottery case), 188 U. S. 321, 358, (1903)) and that whether the power in any given case is vested exclusively in the Federal Government depends upon the nature of the subject to be regulated (*Gilman v. Philadelphia*, 3 Wall. 713, 727 (1866)); and that it is only direct interference with the freedom of interstate commerce that brings a case within the exclusive domain of federal legislation (*Field v. Barber Asphalt Paving Co.*, 194 U. S. 618, 623 (1904).)

A collation of the authorities, dealing, on the one hand with the exercise of the police power by the States and, on the other hand, the authority of Congress to exercise its powers to legislate on interstate commerce under the Commerce clause of the United States constitution, indicates that nine basic postulates may be considered in reaching a decision in the instant case.

Postulate one: Consistent with the power of Congress to regulate commerce among the States, the States pos-

sess, because they have never surrendered, the power to protect the public health, the public morals, and public safety, by any legislation ap- [53] propriate to that end which does not encroach upon rights guaranteed by the National constitution, nor come in conflict with the acts of Congress passed in pursuance of that instrument, (23); but the police power of the State cannot draw within its jurisdiction subject matter which has been delegated to Congress exclusively by the Constitution, (24);

Postulate two: It is a well-established principle that Congress may circumscribe its regulation of interstate commerce and occupy a limited field, and the intent to supersede the exercise by the State of its police power as to matters not covered by the Federal legislation is

(23): *Missouri, K. & T. R. Co. v. Haber*, 169 U. S. 613, 628, (1898). See also *Gloucester Ferry Co. v. Pennsylvania*, 114 U. S. 196, 215 (1885); *Sioux Remedy Co. v. Cope*, 235 U. S. 197, (1914); *New Mexico ex rel. McLean (E. J.) & Co., v. Denver & R. G. R. Co.*, 203 U. S. 38, (1906); *Bowman v. Chicago & N. W. R. Co.*, 125 U. S. 465, 489 (1888); *Robbins v. Taxing Dist. of Shelby County*, 120 U. S. 489, 493 (1887); *Hannibal & St. J. R. Co. v. Husen*, 95 U. S. 465, 470 (1878); *Lake Shore & M. S. R. Co. v. Ohio ex rel Lawrence*, 173 U. S. 285, 292 (1899); *New York, N. H. & H. R. Co. v. New York*, 165 U. S. 628, 631 (1897); *Sligh v. Kirkwood*, 237 U. S. 52 (1915); *Southern R. Co. v. Reid*, 222 U. S. 424 (1912); *Houston & T. C. R. Co. v. Mayes*, 201 U. S. 321 (1906); *Simpson v. Shepard (Minnesota Rate Cases)*, 230 U. S. 352. (1913); *Mintz v. Baldwin*, 289 U. S. 346, (1933); *Kelly v. Washington ex rel. Foss Co.*, 302 U. S. 1, (1937).

(24): *Henderson v. New York*, 92 U. S. 259, 271. (1876).

not to be implied unless the latter fairly interpreted is in actual conflict with the state law. (25);

Postulate three: The principle that a State may enact local laws under its police power in the interest of the welfare of the people, although they affect inter-state commerce, and that such laws may stand at least until Congress takes possession of the field under its superior authority to regulate such commerce, has no application where the State passes beyond the exercise of its legitimate authority, and undertakes to regulate interstate commerce by imposing burdens upon it. (26);

Postulate four: Where the power of Congress to regulate is exclusive, i. e., subjects national in character, the failure of Congress to make express regulations indicates its will that the subject shall be left free from any restrictions or impositions; and any regulations of the

(25) : *Townsend v. Yoemans*, 301 U. S. 441, 454, (1937); citing *Savage v. Jones*, 225 U. S. 501, 533, (1912); *Atlantic Coast Line v. Georgia*, 234 U. S. 280, 293, 294 (1914); *Illinois C. R. Co. v. Public Utilities Commission*, 245 U. S. 493, 510, (1918); *Carey v. South Dakota*, 250 U. S. 118, 122, (1919); *Lehigh Valley R. Co. v. Public Utility Comrs.* 278 U. S. 24, 35 (1928); *Atchison, T. & S. F. R. Co. v. Railroad Commission*, 283 U. S. 380, 392, 393, (1931); *Hartford Indemnity Co. v. Illinois*, 298 U. S. 155, 158, (1936);

(26) : *Lemke v. Farmers' Grain Co.*, 258 U. S. 50, (1922); See also *Kansas City Southern R. Co. v. Kaw Valley Drainage Dist.*, 233 U. S. 75 (1914); *Illinois Cent. R. Co. v. Illinois*, 163 U. S. 142 (1896); *McDermott v. Wisconsin*, 228 U. S. 115 (1913); *Brennan v. Titusville*, 153 U. S. 289, 299 (1894); *Hannibal & St. J. R. Co. v. Husen*, 95 U. S. 465, 472 (1878); *Dahnke-Walker Milling Co. v. Bondurant*, 257 U. S. 282 (1921);

subject by the States, except in matters of local concern only, is repugnant to [54] such freedom, (27);

Postulate five: Where the subjects on which the power may be exercised are local in their nature or operation, or constitute mere aids to commerce, the authority of the State may be exerted for their regulation and management until Congress interferes and supersedes it, (28);

Postulate six: When Congress acts with reference to a matter confided to it by the Constitution, then its statutes displace all conflicting local regulations touching that matter, although such regulations may have been established in pursuance of a power not surrendered by

(27): *Robbins v. Shelby County Taxing Dist.*, 120 U. S. 489, 493 (1887); See also *Southern R. Co. v. Reid*, 222 U. S. 424 (1912); *Western U. Teleg. Co. v. James* 162 U. S. 650, 655, (1896); *United States v. E. C. Knight Co.*, 156 U. S. 1, 11, (1895); *Pittsburg & S. Coal Co. v. Bates*, 156 U. S. 577, 588 (1895); *Wilkerson v. Rahrer* (In re Rahrer), 140 U. S. 545, 555, (1891); *Leisy & Co. v. Hardin*, 135 U. S. 100, 110, (1890); *Philadelphia & S. Mail S. S. Co. v. Pennsylvania*, 122 U. S. 326, 336, (1887); *Walling v. Michigan*, 116 U. S. 446, 455, (1886); *Escanaba & L. M. Transp. Co. v. Chicago*, 107 U. S. 678, (1883); *Welton v. Missouri*, 91 U. S. 275, 282, (1876); *Brennan v. Titusville*, 153 U. S. 302 (1894); *United States v. Rio Grande Dam & Irrig. Co.*, 174 U. S. 690 (1899); *Kelly v. Washington ex rel. Foss Co.*, 302 U. S. 1, (1937).

(28): *Escanaba & L. M. Transp. Co. v. Chicago*, 678, 687 (1883). See also *Cardwell v. American River Bridge Co.*, 113 U. S. 205, 210 (1885); *Simpson v. Shepard* (Minnesota Rate Cases), 230 U. S. 352 (1913).

the States to the General Government, (29); but the action of Congress must be specific in order to be paramount, (30);

Postulate seven: A law of Congress regulating commerce with foreign nations or among the several States is the supreme law, and if the law of a state is in conflict with it, the law of Congress must prevail and the State law cease to operate so far as it is repugnant, (31):

Postulate eight: When Congress exercises its exclusive powers over interstate commerce, the States cannot legislate on the subject, and the situation is covered as much by what is not done by Congress or the Interstate Commerce Commission, as by the regulations it has made, and the State has no power to fill what it may

(29): *Lake Shore & M. S. R. Co. v. Ohio*, 173 U. S. 285, 297, a (1899). See also *Gulf, C. & S. F. R. Co. v. Hefley*, 158 U. S. 98, 104, (1895); *Missouri, K. & T. R. Co. v. Harris*, 234 U. S. 412 (1914); *Erie R. Co. v. New York*, 233 U. S. 671 (1914); *Asbell v. Kansas*, 209 U. S. 251 (1908); *Smith v. Alabama*, 124 U. S. 465, 473, (1888); *Smith v. Turner* (Passenger cases), 7 How. 283, 396 (1849); *Savage v. Jones*, 225 U. S. 501 (1912); *Chicago, R. I. & P. R. Co. v. Hardwick*, 226 U. S. 426 (1913); *Missouri Pac. R. Co. v. Porter*, 273 U. S. 341, (1927);

(30): *Missouri P. R. Co. v. Larabee Flour Mills*, 211 U. S. 612 (1909);

(31): *Thurlow v. Massachusetts* (License Cases), 5 How. 504, 574 (1847). See also *McDermott v. Wisconsin*, 228 U. S. 115 (1913); *Missouri, K. & T. R. Co. v. Harris*, 234 U. S. 412, (1914); *Southern R. Co. v. Reid*, 222 U. S. 424, (1912); *Chicago I. & L. R. Co. v. Hackett*, 228 U. S. 559, (1913); *Railroad Commission v. Southern P. Co.*, 264 U. S. 331 (1924); *Kelly v. Washington ex rel Foss Co.*, 302 U. S. 1, (1937).

regard as a hiatus left by Congress and the Interstate Commerce Commission, (32); and

Postulate nine: Even when an act of Congress does not go into effect until a certain time following its passage, State legislation is immediately superseded upon the enactment of the Federal statute, (33); [55]

The power which the Constitution bestows upon Congress over commerce does not exhaust the subject of the control of commerce for there is a commerce which lies beyond the power of Congress to control. The States have a commerce of their own and they are as supreme in its control as Congress is supreme in the control of interstate and foreign commerce. This has never been disputed since the case of *Gibbons v. Ogden*, 9 Wheat. 1, (1824), (34). [57]

The power to regulate commerce among the States is a unit, but if particular subjects within its operation do not require the application of a general or uniform system, *the States may legislate in regard to them with a*

(32): *Whish v. Public Service Commission*, 240 N. Y., 677 (1925). See also *Missouri, K. & T. R. Co., v. Haber*, 169 U. S. 613, 627 (1898); *Michigan C. R. Co. v. Vreeland*, 227 U. S. 59, (1913);

(33): *Northern P. R. Co. v. Washington ex rel. Atkinson*, 222 U. S. 370, (1912).

(34): *Lord v. Goodall, N. & P. S. S. Co.*, 102 U. S. 541, 543, (1881). See also *Thurlow v. Massachusetts (License Cases)* 5 How. 504, 574, (1847); *Smith v. Turner (Passenger cases)* 7 How. 283, 415 (1849); *Sinnot v. Davenport*, 22 How. 227, 243 (1849); *Hall v. DeCuir*, 95 U. S. 485, 488 (1878); *Addyston Pipe & Steel Co., v. United States*, 175 U. S. 211, 247, (1899); *Simpson v. Shepard (Minnesota Rate Cases)*; 230 U. S. 352 (1913); *Houston, E. & W. T. R. Co. v. United States*, 234 U. S. 342 (1914).

view to local needs and circumstances until Congress otherwise directs; (italics supplied) but the power thus exercised by the States is not identical in its extent with the power to regulate commerce among the States. The power to pass laws in respect to internal commerce, inspection laws, (35); quarantine and health laws, (36); and laws in relation to bridges, ferries, and highways belongs to the class of power pertaining to locality, essential to local intercommunication, to the protection, the

(35): Foster v. Master and Wardens of Port of New Orleans, 94 U. S. 246 (1877). See also Red "C" Oil Mfg. Co. v. Board of Agriculture, 222 U. S. 380, (1912); New Mexico ex rel. McLean v. Denver & R. G. R. Co. 203 U. S. 38, (1906); Arbuckle v. Blackburn, 191 U. S. 405, 414 (1903); Pittsburgh & S. Coal. v. Louisiana, 156 U. S. 590, 597, (1895); Savage v. Jones, 225 U. S. 501 (1912); Vance v. Vandercook Co., 170 U. S. 438, 455 (1898); Turner v. Maryland, 107 U. S. 38, (1883); Standard Stock Food Co. v. Wright, 225 U. S. 540, (1912); Hinson v. Lott, 8 Wall. 148 (1869); Scott v. Donald, 165 U. S. 58 (1897); Pabst Brewing Co. v. Crenshaw, 198 U. S. 17 (1905); Patapsco Guano Co. v. Board of Agriculture, 171 U. S. 345 (1898); Foote v. Stanley, 232 U. S. 494 (1914); Pure Oil Co. v. Minnesota, 248 U. S. 158 (1918); Standard Oil Co. v. Graves, 249 U. S. 389 (1919).

(36): Smith v. Turner (Passenger Cases) 7 How. 283, 400, (1849); See also Louisiana v. Texas, 176 U. S. 1, 21, (1900); Minnesota v. Barber, 136 U. S. 313, 319, (1890); Compagnie Francaise de Navigation v. Louisiana, 186 U. S. 380, 385 (1902); Reid v. Colorado, 187 U. S. 137, 151 (1902); Asbell v. Kansas, 209 U. S. 251, (1908); Hannibal & St. J. R. Co. v. Husen, 95 U. S. 465, 471, (1878); Kimmish v. Ball, 129 U. S. 217, 220 (1889); Rasmussen v. Idaho, 181 U. S. 198, (1901); Smith v. St. Louis & S. W. R. Co., 181 U. S. 248 (1901); Missouri, K. & T. R. Co. v. Haber. 169 U. S. 613, 636 (1898); Morgan's L. & T. R. & S. S. Co. v. Board of Health, 118 U.S. 455, 465, (1886); Mintz v. Baldwin, 289 U. S. 346, (1933).

safety, and the welfare of society, originally necessarily belonging to, and upon the adoption of the Constitution reserved by, the States, except so far as falling within the scope of a power confided to the general government. Where the subject matter requires a uniform system as between the States, the power controlling it is vested exclu- [58] sively in Congress and cannot be encroached upon by the State; but where in relation to the subject matter different rules may be suitable for *different localities, the States may exercise powers which, though they may be said to partake of the nature of the power granted to the Federal government, are strictly not such, but are simply local powers, which have full operation until or unless circumscribed by the action of Congress.* (37) (italics supplied).

Consistent with the power of Congress to regulate commerce, the States possess, because it was reserved, the power to protect the public health, the public morals, and the public safety by any legislation appropriate to that end which does not encroach upon rights guaranteed by the National constitution nor come in conflict with acts

(37): Leisy (Gus) & Co. v. Hardin, 135 U. S. 100, 108, (1890); see also Simpson v. Shepard (Minnesota Rate Cases), 230 U. S. 352 (1913); Southern R. Co. v. Reid, 222 U. S. 424 (1912); Escanaba & L. M. Transp. Co. v. Chicago, 107 U. S. 678, 683 (1883); Mobile County v. Kimball, 102 U. S. 691, 698 (1881); Gilman v. Philadelphia, 3 Wall, 713, 727 (1866); Cardwell v. American River Bridge Co., 113 U. S. 205, 210, (1885); Stone v. Farmers Loan & T. Co. (Railroad Commission Cases), 116 U. S. 307 (1886); Peik v. Chicago & N. W. R. Co., 94 U. S. 164 (1877); Smith v. Turner (Passenger Cases), 7 How. 283 (1849); Covington & C. Bridge Co. v. Kentucky, 154 U. S. 204, 209 (1894); Western U. Teleg. Co. v. Kansas ex rel. Coleman, 216 U. S. 1 (1910); Cummings v. Chicago, 188 U. S. 410, (1903); New York ex rel Pennsylvania R. Co. v. Knight, 192 U. S. 21, 27 (1904); Valley S. S. Co. v. Wattawa, 244 U. S. 202 (1917); Interstate Transit v. Lindsey, 283 U. S. 183 (1931).

of Congress, (38). But while a State can do nothing which will directly or indirectly (39) burden or impede interstate commerce, and the police power does not justify a direct interference with such commerce (40) it may make valid enactments in the exercise of its legislative power to promote the welfare and convenience of its citizens, although in their operation they may have an effect upon interstate commerce. (41). [59]

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- (38): *Missouri K. & T. R. Co. v. Haber*, 169 U. S. 613, 628, (1898); See also *Sioux Remedy Co. v. Cope*, 235 U. S. 197 (1914); *New Mexico ex rel McLean & Co. v. Denver & R. G. R. Co.*, 203 U. S. 38 (1906); *Houston & T. C. R. Co. v. Mayes*, 201 U. S. 321 (1906); *Bowman v. Chicago & N. W. R. Co.*, 125 U. S. 465, 489 (1888); *Robbins v. Shelby County*, 120 U. S. 489, 493, (1887); *Gloucester Ferry Co. v. Pennsylvania*, 114 U. S. 196, 215 (1885); *Hannibal & St. J. R. Co. v. Husen*, 95 U. S. 465, 470 (1878); *Lake Shore & M. S. R. Co. v. Ohio ex rel. Lawrence*, 173 U. S. 285, 292 (1899); *New York, N. H. H. R. Co. v. New York*, 165 U. S. 628, 631 (1897); *Sligh v. Kirkwood*, 237 U. S. 52 (1915); *Western U. Teleg. Co. v. Kansas ex rel. Coleman*, 216 U. S. 1, 26, (1910).
- (39): *Northern Securities Co. v. United States*, 193 U. S. 197, 350 (1904); Cf. *Western Distributing Co. v. Public Service Commission*, 285 U. S. 119 (1932);
- (40): *New York, N. H. & H. R. Co. v. New York*, 165 U. S. 628, 631 (1897); See also *Henderson v. New York*, 92 U. S. 259 (1876); *Chy Lung v. Freeman*, 92 U. S. 275 (1876); *New York v. Compagnie Generale Transatlantique*, 107 U. S. 59 (1883); *Illinois Cent. R. Co. v. Illinois ex rel. Butler*, 163 U. S. 142 (1896); *McDermott v. Wisconsin*, 228 U. S. 115 (1913); *Savage v. Jones*, 225 U. S. 501 (1912); *Brennan v. Titusville*, 153 U. S. 289, 299 (1894); *Schollenberger v. Pennsylvania*, 171 U. S. 1, 12 (1898); *Seaboard Air Line R. Co. v. Blackwell*, 244 U. S. 310 (1917); *Lemke v. Farmers Grain Co.*, 258 U. S. 50, (1922); *Clyde Mallory Lines v. Alabama*, 296 U. S. 261 (1935); *DiSanto v. Pennsylvania*, 273 U. S. 34 (1927); *Missouri P. R. Co. v. Castle*, 224 U. S. 541 (1912);
- (41): *Pennsylvania R. Co. v. Hughes*, 191 U. S. 477, 488, (1903). See also *South Covington & C. St. R. Co. v. Covington*, 235 U. S. 537, (1915); *Asbell v. Kansas*, 209 U. S. 251 (1908); *Sherlock v. Alling*, 93 U. S. 99, 103 (1876); *Louisville & N. R. Co. v. Kentucky*, 183 U. S. 503, 518 (1902); *Standard Oil Co. v. Tennessee*, 217 U. S. 413, (1910).

Generally it may be said in respect to laws of this character that, though resting upon the police power of the State, they must yield whenever Congress, in the exercise of the powers granted to it, legislates upon the precise subject matter, for that power, like all other reserved powers of the States, is subordinate to those in terms conferred by the Constitution upon the Nation, (42). [60]

Fourteenth Amendment to the Constitution of the
United States:

As to the allegation of the plaintiff that Maynard Garrison, Insurance Commissioner of the State of California, acting through his deputies, has interfered with the representatives of plaintiff and threatened them with prosecution if they persisted in aiding the insurance transactions of plaintiff in California in violation of the Fourteenth Amendment to the Constitution of the United States, it is well settled that the police power may be exerted by the State, under certain limitations, of course, notwithstanding the Fourteenth Amendment. (*Liggett (Louis K.) Co. v. Baldrige*, 278 U. S. 105, 111-112, (1928); *Noble State Bank v. Haskell*, 219 U. S. 104, (1911); *Minneapolis & St. L. Ry. Co. v. Beckwith*, 9 S. Ct. 207, 209; 129 U. S. 29; 32 L. Ed. 585.)

The court finds it difficult to ascertain the exact contention of plaintiff for it concedes the power of the State.

(42) : *Gulf, C. & S. F. R. Co. v. Hefley*, 158 U. S. 98, 104, (1895).
See also *Chicago R. I. & R. R. Co. v. Hardwick Farmers Elevator Co.*, 226 U. S. 426 (1913); *Missouri K. & T. R. Co. v. Haber*, 169 U. S. 613, 627 (1898); *Michigan C. R. Co. v. Vreeland*, 227 U. S. 59 (1913); *Illinois C. R. Co. v. DeFuentes*, 236 U. S. 157 (1915); *Railroad Commission (California) v. Southern P. R. Co.*, 264 U. S. 33 (1924).

under the police power, to make local rules and regulations which indirectly interfere with interstate commerce (page 2 of brief); it states that it is "not an attempt by a foreign insurance company to transact business in the State of California without meeting the standards of safety set by that state", (page 11 of its brief); that "this case does not present the question as to whether or not the laws of California will be nullified but as to whether the State of California can nullify the laws of every other State in the Union if the companies organized in those states are to do an interstate business with the citizens of that state", (page 12 of brief); and yet plaintiff is praying for injunctive relief to prohibit the defendants from interfering with its business transactions in California, a position which is not quite clear to the court, for if it met the same standards [61] demanded of local insurers this case would not have arisen.

Whether it is actually plaintiff's position that California at the present time has no law regulating the insurance business as conducted by the plaintiff, or that its laws in this respect are now invalidated by reason of the decision in the case of *United States v. South-Eastern Underwriters Assn.*, 322 U. S. 533; 64 Sup. Ct. Rep. 1162; 88 L. Ed. 1082, makes no difference so far as the decision in this case is concerned, because the ultimate fact is that plaintiff is attempting, in any event, to transact an insurance business in California without meeting the standards of safety required by the State (see page six of this Opinion); and there can be no doubt but that if the court sustained plaintiff's position, California laws, established under the police power for the protection of the public, would be to that extent nullified.

The court takes judicial notice of the fact that Congress has not yet legislated in insurance matters, and,

until it does, and to that extent only, State statutes enacted under the police power still remain in full force and effect.

“In construing Federal statutes enacted under the power conferred by the commerce clause of the Constitution the rule is that it should never be held that Congress intends to supersede or suspend the exercise of the reserved powers of a state, even where that may be done, unless, and except so far as, its purpose to do so is clearly manifested (cases cited).” *Illinois Central Railroad Co. v. Public Utilities Commission*, 245 U. S. 493, 510.

“If, reading the Federal act as a whole, there were room for doubt, two established rules of construction would lead us to resolve the doubt in favor of sustaining the validity of the state law. First: The intent to supersede the exercise by a state of its police powers is not to be implied unless the act of Congress, fairly interpreted, is in actual conflict with the law of the State.” (Cases cited.) *Carey v. State of South Dakota*, 250 U. S. 118, 122.

“The principle thus applicable has been frequently stated. It is that Congress may circumscribe its regulation and occupy a limited field, and that the intention to supersede the exercise by the State of its authority as to matters not covered by the federal legislation is not to be implied unless the Act of Congress fairly interpreted is in conflict with the law of the State.” (Cases cited.) *Atchison Ry. v. Railroad Commission*, 283 U. S. 380, 392. [62]

“The case calls for the application of the well-established principle that Congress may circumscribe its regulation and occupy a limited field, and that the

intent to supersede the exercise by the State of its police power as to matters not covered by the federal legislation is not to be implied unless the latter fairly interpreted is in actual conflict with the state law." (Cases cited) 301 U. S. 441, 454.

Courts do not legislate and, a fortiori, until the National Congress does legislate in insurance matters, local statutes governing the subject are in a stronger position than where there has been Federal legislation on the subject. Mr. Chief Justice Stone, in his dissenting Opinion in the foregoing case of U. S. v. South-Eastern Underwriters Assn. (*supra*), while he was apprehensive of the consequences that would follow the ruling in that case, nowhere gives the slightest intimation that all state laws governing insurance companies are rendered ipso facto void, but stated that those matters would have to be decided by a case-to-case determination with "a consideration of all the relevant facts and circumstances." It is conceivable that, as the Federal Congress legislates on insurance, as it may now do because it has been determined to be interstate commerce, state laws will fall, under Postulate six (page 20), but only to the extent that they are supplemented by Federal legislation, and that, in the meantime, state statutes control.

Chief Justice Stone states:

"... the ruling that insurance is not commerce, and is therefore unaffected by the restrictions which the commerce clause imposes on state legislation, removed the most serious obstacle to regulation of that business by the states. Through their plenary power over domestic and foreign corporations which are not engaged in interstate commerce, the states have developed extensive and effective systems of regula-

tion of the insurance business, often solving regulatory problems of a local character with which it would be impractical or difficult for Congress to deal through the exercise of the commerce power . . .” [63]

“But the immediate and only practical effect of the decision now rendered is to withdraw from the states, in large measure, the regulation of insurance and to confer it on the national government, which has adopted no legislative policy and evolved no scheme of regulation with respect to the business of insurance. Congress having taken no action, the present decision substitutes, for the varied and detailed state regulation developed over a period of years, the limited aim and indefinite command of the Sherman Act for the suppression of restraints on competition in the marketing of goods and services in or affecting interstate commerce, to be applied by the courts to the insurance business as best they may.

In the years since this court’s pronouncement that insurance is not commerce came to be regarded as settled constitutional doctrine, vast efforts have gone into the development of schemes of state regulation and into the organization of the insurance business in conformity to such regulatory requirements. Vast amounts of capital have been invested in the business in reliance on the permanence of the existing system of state regulation. How far that system is now supplanted is not, and in the nature of things could not well be, explained in the court’s opinion. The Government admits that statutes of at least five states will be invalidated by the decision as in conflict with the Sherman Act, and the argument in this court reveals serious doubt whether many others may not

also be inconsistent with that Act. The extent to which still other statutes will now be invalidated as in conflict with the commerce clause has not been explored in any detail in the briefs and argument or the Court's opinion.

Certainly there cannot but be serious doubt as to the validity of state taxes which may now be thought to discriminate against the interstate commerce, cf. *Philadelphia Fire Assn. v. New York*, 119 U. S. 110; or the extent to which conditions may be imposed on the right of insurance companies to do business within a state; or in general the extent to which the state may regulate whatever aspects of the business are now for the first time to be regarded as interstate commerce. While this court no longer adheres to the inflexible rule that a state cannot in some measure regulate interstate commerce, the application of the test presently applied requires 'a consideration of all the relevant facts and circumstances' in order to determine whether the matter is an appropriate one for local regulation and whether the regulation does not unduly burden interstate commerce, *Parker v. Brown*, 317 U. S. 341-362—a determination which can only be made upon a case-to-case basis. Only time and costly experience can give the answers."

Mr. Chief Justice Stone's apprehension that the decision in *United States v. South-Eastern Underwriters Assn.* (supra) [64] would open wide the door to determine just how far State laws controlling insurance under the police power would be subject to the commerce clause has begun to bear fruit in this case, and what the constitutional repercussions will develop over a period of years is solely within the lap of Providence to determine.

State laws regulating insurance companies, both foreign and domestic, have uniformly been upheld as a proper exercise of the police power of the State (*German Alliance Ins. Co. v. Kansas*, 233 U. S. 389 at p. 412.) It should be borne in mind that we are not dealing with a case where the State of California is prohibiting the plaintiff from transacting business under any conditions, or discriminating against the plaintiff in favor of a domestic insurance company; and that this case does not involve a tax problem.

A very narrow line divides the authority of Congress under the commerce clause of the Constitution and the power of the State under the police power. Each case stands alone. Power seldom yields its attributes of sovereignty but constantly seeks to extend its authority. The police power is the only barirer when two authorities come in conflict. The police power is incapable of exact definition, yet it comes to the rescue of laws of doubtful constitutionality, if the courts find such laws sustain public morals, good order, good manners, contribute to public health and safety, prevent evil or harm and encourage social and business intercourse and in general contribute to the "pursuit of happiness" of the people. Suit against a State:

The defendants also move for a dismissal of the complaint herein under the 11th Amendment to the Constitution of the United States that "The judicial power of the [65] United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by citizens of another State, or by citizens or subjects of any Foreign State", on the theory that this suit is actually a suit against the State of California without its consent, which consent has not been obtained. The plaintiff corporation is a

"citizen of another state" within the definition of the 11th amendment to the Constitution of the United States (see *Manchester Fire Insurance Co. v. Harriott*, CC (Iowa), 91 Fed. 711). Plaintiff cites the case of *Great Northern Life Ins. Co. v. Reed*, 64 Sup. Ct. Rep. 873, 875, and also *Ex parte State of New York*, 256 U. S. 497, 500.

Plaintiff, in support of its contention that its suit is not against the State of California, cites the case of *Sterling v. Constantine*, 287 U. S. 378; 53 S. Ct. 190; 77 L. Ed. 375 (where the court found the Governor of Texas had exceeded his authority in issuing a proclamation that martial law existed); the case of *Felt and Tarrant Mfg. Co. v. Corbett* (Cal.), 23 F. Supp. 186 (which stated the applicable principle to be that where state officials, purporting to act under state authority, invade the rights secured by the Federal constitution, they are subject to the process of the Federal courts); and other cases, each of which has been read by the court; but these cases are either not in point on the facts in the instant case, the officers exceeded their authority, or they involve acts under unconstitutional state statutes, whereas the court in the instant case finds no similar circumstances in the motion under advisement. Where the court finds that state officers are acting under constitutional statutes such suits cannot generally be maintained.

In an action such as this, it remains the duty of the [66] court to decide all cases brought before it by citizens of one State against citizens of a different State, where a State is not necessarily a defendant (*United States v. Peters*, 5 Cir. 115, 137 (1809)); it must be regarded as a settled doctrine of this court, established by its decisions, that the question whether a suit is within the prohibition of the Eleventh Amendment is not always determined by

reference to the nominal parties on the record, but is determined by a consideration of the nature of the case as presented on the whole record (*Ex parte Ayers*, 123 U. S. 443, 487, (1887) distinguishing *Poindexter v. Greenhow*, 114 U. S. 270 (1885) from *Osborn v. Bank of United States*, 9 Wheat 738 (1824).

The adoption of the Eleventh Amendment to the Constitution overruled the decision of the Supreme Court of the United States written by Justice Iredell in *re Chisholm v. Georgia*, 2 Dallas 419 (1793) sustaining the right of a citizen to sue a State.

A suit nominally against individuals, but restraining or otherwise affecting their action as State officers may be in substance a suit against the State which the Constitution forbids, (43). [67] A suit against the governor solely in his official capacity to recover money in the state-treasury, was considered a suit against the state (*Governor of Georgia v. Madrazo*, 1 Pet. 110, (1828) confirmed in *Kentucky v. Dennison*, 24 How, 66, 98, (1861).)

Federal jurisdiction to enjoin execution of a State law on the ground of unconstitutionality should be exercised only in clear cases and when necessary to prevent great and irreparable injury (*Cavanaugh v. Looney*, 248

(43): *Worcester County Trust Co. v. Riley*, 302 U. S. 292, (1937), citing *Louisiana v. Jumel*, 107 U. S. 711, (1883); *Hagood v. Southern*, 117 U. S. 52 (1886); *In re Ayers*, 123 U. S. 443 (1887); *North Carolina v. Temple*, 134 U. S. 22, 30, (1890); *Smith v. Reeves*, 178 U. S. 436 (1900); *Lankford v. Platte Iron Works*, 235 U. S. 461 (1915); *Ex parte State of New York*, No. 1, 256 U. S. 490, 500 (1921); *Missouri v. Fiske*, 290 U. S. 18, 28 (1933); *Cunningham v. Macon & Brunswick, R. Co.*, 109 U. S. 446 (1883); *Wells v. Roper*, 246 U. S. 335 (1918).

U. S. 453 (1919); followed in *Hygrade Provision Co. v. Sherman*, 266 U. S. 497, 500 (1925); *Massachusetts State Grange v. Benton*, 272 U. S. 525, (1926). Only a case of manifest oppression will justify such interference; the reluctance of the court to interfere by injunction with the activities of State officials conscientiously endeavoring to fulfill their duty, was of itself adequate ground for refusing an injunction against certain state and county highway officials, to restrain interference with maintenance of a bridge, and collection of tolls,—a matter which depended upon the construction of the local law against perpetuities (*Hawks v. Hamill*, 288 U. S. 52, (1933).)

Ordinarily there should be no interference with such officers, primarily they are charged with the duty of prosecuting offenders against the laws of the state, and must decide when and how this is to be done. "The accused should first set up and rely upon his defense in the State court even though this involves a challenge of the validity of some statute, unless it plainly appears that this course would not afford adequate protection." (*Fenner v. Boykin*, 271 U. S. 240, 243 (1926), refusing injunction to restrain law officers from enforcing by arrest and prosecution a state law penalizing certain gambling contracts on the [68] ground of interference with interstate commerce and deprivation of constitutional rights.)

Generally, suits to restrain action of State officials can, consistently with the constitutional prohibition, be prosecuted only when the action sought to be restrained is *without the authority of State law or contravenes the*

statutes or Constitution of the United States, (44) (italics supplied).

In view of the fact that this court is not holding that the State statutes in question are unconstitutional, or have been vitiated, even pro tanto, by the decision of the Supreme Court of the United States in the case of *United States v. South-Eastern Underwriters Assn.*, 322 U. S. 533; 64 Sup. Ct. Rep. 1162; 88 L. Ed. 1082, it must necessarily hold that this suit is against the State without its consent, in violation of the 11th Amendment to the Constitution of the United States and hence cannot be maintained. Plaintiff's theory that the cause of action can be maintained against these defendants in their official capacities is necessarily predicated upon its contention that the State statutes in question are unconstitutional, or at least have been vitiated, *pro tanto*, by the aforementioned Supreme Court decision, and its contention would be sound if such were the fact; but, in view of the fact that the court is holding that the State statutes in question have not been invalidated, it is believed that the plaintiff will have no quarrel with the court's ruling. [69]

There are quite a number of authorities holding that state officers can be sued where they are acting under an unconstitutional state statute, as not being a suit against the state. For instance, suits by individuals against defendants who claim to act as officers of a

(44): *Worcester County Trust Co. v. Riley*, 302 U. S. 292, (1937), citing *Ex parte Young*, 209 U. S. 123 (1908), *Scully v. Bird*, 209 U. S. 481 (1908); *Old Colony Trust Co. v. Seattle*, 271 U. S. 426 (1926); *Louisiana v. Jumel*, 107 U. S. 711 (1883); *Hagood v. Southern*, 117 U. S. 52 (1886), *In re Ayers*, 123 U. S. 443 (1887); *Lankford v. Platte Iron Works*, 235 U. S. 461 (1915).

State, and, under color of an unconstitutional statute, to recover for injury to property; or to recover money or property unlawfully taken from them in behalf of the State; or, for compensation for damages; or, in a proper case, for an injunction to prevent such wrong and injury; or, for a mandamus to enforce the performance of a plain legal duty, purely ministerial; are not, within the meaning of the amendment, suits against the State, (45).

An injunction against sale by a State land commissioner, under a statute adjudged unconstitutional, of swamp lands purchased under an earlier act was held not a suit against the state, (46). Furthermore, a suit against State officers to enjoin them from enforcing a tax alleged to be in violation of the Constitution of the United States is not a suit against a State within the prohibition of the Eleventh Amend- [70] ment (*Gunter v. Atlantic Coast Line R. Co.*, 200 U. S. 273, 283, (1906).) This doctrine announced in many previous cases on the subject was stated by Mr. Justice Harlan,

(45): *Re Tyler*, 149 U. S. 164, 190 (1893) followed in *Scott v. Donald*, 165 U. S. 58, 67; 165 U. S. 107 (1897).

(46): *Pennoyer v. McConnaughy*, 140 U. S. 1, (1891). In reaching this conclusion the court cited *Osborn v. Bank of United States*, 9 Wheat. 738 (1824); *Davis v. Gray*, 16 Wall. 203 (1873) (suit to restrain sale of railroad land grants, declared forfeited by State law); *Tomlinson v. Branch*, 15 Wall. 460, (1873); *Litchfield v. Webster County*, 101 U. S. 773, (1879); *Board of Liquidation v. McComb*, 92 U. S. 531, (1876) (restraint of State commission from issuing, in liquidation of State debt to a certain Levee Co., of certain of the same kind of bonds as held by petitioner); *Allen v. Baltimore & O. R. Co.*, 144 U. S. 311 (1885) (similar to *McComb* case); *Poindexter v. Greenhow*, 114 U. S. 270 (1885) detinue against a tax collector who, under color of State law, held unconstitutional, refused tender of tax receivable coupons and distrained on certain property of petitioner.

in *Smyth v. Ames*, wherein it was said: "It is the settled doctrine of this court that a suit against individuals for the purpose of preventing them as officers of a State from enforcing an *unconstitutional enactment* (italics supplied) to the injury of the rights of the plaintiff, is not a suit against the State within the meaning of that Amendment (169 U. S. 466, 518-519), (1898). See also *Prout v. Starr*, 188 U. S. 537 (1903); *Reagan v. Farmer's Loan & T. Co.*, 154 U. S. 362 (1894).

Furthermore, a suit to restrain a State officer from executing an *unconstitutional statute* (italics supplied), in violation of plaintiff's rights and to his irreparable damage, is not a suit against the State, and individuals who, as officers of the State, are clothed with some duty in regard to the enforcement of the laws of the State, and who threaten and are about to commence proceedings, either of a civil or criminal nature, to enforce against parties affected an unconstitutional act (italics supplied) violating the Federal Constitution, may be enjoined by a Federal court of equity from such action. (Ex parte *Young*, 209 U. S. 123 (1908).) This principle is not confined to the maintenance of suits to restrain enforcement of statutes which are unconstitutional, but applies also when the attempted administration of a valid statute is unconstitutional, (47). The citations

(47): *Greene v. Louisville & I. R. Co.*, 244 U. S. 499, (1917), followed in *Louisville & N. R. Co. v. Greene*, 244 U. S. 522 (1917); *Illinois C. R. Co. v. Greene*, 244 U. S. 555 (1917); See also *Tanner v. Little*, 240 U. S. 369 (1916); *Harrison v. St. Louis & S. F. R. Co.*, 232 U. S. 318 (1914); *Herndon v. Chicago R. I. & P. R. Co.*, 218 U. S. 135 (1910); *Ludwig v. Eastern Union*, 216 U. S. 146, (1910); *Hunter v. Wood*, 209 U. S. 205 (1908); *Philadelphia Co. v. Stimson*, 223 U. S. 605, 621, (1912); *Truax v. Raich*, 239 U. S. 33, 37, (1915); *Worcester County Trust Co. v. Riley*, 302 U. S. 292 (1937).

of plaintiff to the effect that these defendants can be sued in their official capacities in the Federal court are based upon the theory that they are acting under an unconstitutional state statute.

In view of the foregoing decisions the court deems it unnecessary to go into the doctrine of res judicata. [71]

In accordance with the foregoing Opinion, the court finds that the insurance statutes of the State of California, involved in this suit, have not been vitiated in any way by the decision of the Supreme Court in the case of *United States v. South-Eastern Underwriters Assn.*, (*supra*), which are still in full force and effect for the purposes of this suit; and that this is in fact a suit instituted against the State of California without its consent, in violation of the Eleventh Amendment to the Federal Constitution, and, therefore, cannot be maintained, no consent having been given thereto and the suit against Alvin J. O'Lein having been dismissed.

The defendants' motion to dismiss is granted and counsel for the defendants will prepare a judgment of dismissal with costs for the signature of the court, after having presented same to counsel for the plaintiff for approval as to form.

Dated—Los Angeles, California, this 16 day of January, 1945.

J. F. T. O'CONNOR
Judge

[Endorsed]: Filed Jan. 16, 1945. [72]

United States District Court
Southern District of California
Central Division

No. 3895 O'C Civil

First National Benefit Society, a Corporation,
Plaintiff

-vs-

Maynard Garrison, Insurance Commissioner of the State
of California and H. F. Risbrough, Mae Barr Long,
Doe I, Doe II, Doe III, Deputy Insurance Commission-
ers of the State of California, and Alvin J. O'Lein,
and Doe IV and Doe V,

Defendants.

JUDGMENT.

This action having come on for hearing upon defend-
ants' motion to dismiss, and after argument by counsel
for the respective parties, the Court having granted said
motion and ordered this action to be dismissed with costs
to the defendants,

It Is Ordered, Adjudged and Decreed that defendants'
motion to dismiss be sustained and that the above en-
titled action be and the same is hereby dismissed, and that
defendants have and recover costs from the plaintiff to be
hereafter taxed [73] in the sum of \$16.25.

Dated Feby. 9th, 1945.

J. F. T. O'CONNOR
Judge

Approved as to form as provided in Rule 7a.

Robert R. Weaver and Earl Blodgett

By Earl Blodgett.

Attorneys for Plaintiff.

Judgment entered Feb. 9, 1945. Docketed Feb. 9, 1945.
Book C. O. 30, page 661. Edmund L. Smith, clerk, by
Francis E. Cross, deputy.

[Endorsed]: Filed Feb. 9, 1945. [74]

[Title of District Court and Cause.]

NOTICE OF APPEAL.

Notice is hereby given that the First National Benefit Society, A Corporation, the above named Plaintiff, hereby appeals to the United States Circuit Court of Appeals for the Ninth Circuit from the Order of Dismissal heretofore entered in the said cause and from the judgment of dismissal entered in this action on the 9th day of February, 1945.

ROBERT R. WEAVER
404 First National Bk Bldg
Phoenix, Arizona [75]

EARL BLODGETT
417 S. Hill Street
Los Angeles (13) California
Attorneys for Plaintiff.

[Endorsed]: Filed & mailed copy to Atty. General,
State of Calif. Mar. 16, 1945. [76]

[Title of District Court and Cause.]

BOND ON APPEAL TO SECURE COSTS.

Know All Men by These Presents: That the above named plaintiff and appellant, has this day, upon and with filing of it's Notice of Appeal herein, and pursuant to Rule 73 (c) of the Rules of Civil Procedure pertaining to appeals to the Circuit Court of Appeals, deposited with the Clerk of the above entitled court the sum of Two Hundred Fifty and no/100 (\$250.00) Dollars, the property of the plaintiff and appellant herein, the same being posted as bond and conditioned to secure the payment of costs if the appeal in the above entitled matter be dismissed or the judgment from which said appeal is taken if the same be affirmed or to secure the payment of such costs [77] as the appellate court may award if the judgment is modified, as in said rule provided.

Dated this 16th day of March, 1945.

FIRST NATIONAL BENEFIT SOCIETY,

A Corporation,

By ROBERT R. WEAVER

EARL BLODGETT

Attorneys for Plaintiff and Appellant.

Rec'd \$250. from Earl Blodgett, Atty for plf & depos same in Reg.

Mar. 16, 1945.

EDMUND L. SMITH,

Clerk U. S. District Court, Southern District
of California,

By E. M. Enstrom, Jr.

Deputy.

[Endorsed]: Filed Mar. 16, 1945. [78]

[Title of District Court and Cause.]

STATEMENT OF POINTS TO BE RELIED UPON
ON APPEAL.

Comes now, the First National Benefit Society, a Corporation, Appellant in the above entitled cause, and states that the points upon which it intends to rely on Appeal in this case are that the Court has erred in entering its order for Dismissal of the said cause and in entering judgment of Dismissal of the said cause, for the following reasons:

A.

The Complaint herein states a cause of action against [79] Defendants within the jurisdiction of the United States District Court, as follows:

1. The allegations of the Complaint set forth a Federal question within the jurisdiction of the trial court.
2. The Plaintiff is entitled to an Injunction against the Defendants and each of them pending the determination of such Federal question.
3. The Complaint complains of acts which violate the fundamental rights of the Plaintiff under the Fourteenth Amendment to the Constitution.
4. The acts of the Defendants complained of in the said Complaint are calculated to and will destroy the business of the Appellant already on its books and legitimately acquired.
5. The action is not one against the State of California, but is an action seeking an Injunction against acts of the Defendants performed under color of a State law void in its application to the facts stated in the Complaint and the determination thereof involves a Federal question.

B.

The acts complained of in the said Complaint constitute a violation of the Commerce Clause of the Constitution of the United States, as follows:

1. The Complaint alleges facts in regard to certain transactions of the Plaintiff which constitute (without dispute) Interstate Commerce.
2. The acts of the Defendants complained of in the Complaint are done under the supposed authority of State laws which are extra-territorial in [80] effect and which assume to regulate Plaintiff's business in the State of its organization and incorporation, and in all states in which it does business.
3. The acts of the Defendants complained of place an undue burden on Interstate Commerce.
4. The acts of the Defendants and each of them prohibit Plaintiff from completing any Interstate transaction with any citizen of the State of California.
5. The acts of the Defendants complained of in the Complaint require the Plaintiff to obtain a license to enter into Interstate transaction with a citizen of the State of California.

ROBERT R. WEAVER
404 First National Bank Bldg.
Phoenix, Arizona

EARL BLODGETT
448 S. Hill Street
Los Angeles (13) Calif.
Attorneys for Plaintiff.

[Endorsed]: Filed Mar. 16, 1945. [81]

[Title of District Court and Cause.]

CERTIFICATE OF CLERK.

I, Edmund L. Smith, Clerk of the District Court of the United States for the Southern District of California, do hereby certify that the foregoing pages numbered from 1 to 89 inclusive contain full, true and correct copies of Complaint for Injunction; Order; Notice of Motion to Dismiss; or Motion for More Definite Statement; Points and Authorities in Opposition to Motion to Dismiss etc.; Minute Orders Entered November 6, 1944 and December 29, 1944 respectively; Opinion of the Court; Judgment; Notice of Appeal; Bond on Appeal to Secure Costs; Statement of Points to be Relied Upon on Appeal; Designation of Parts of the Record Deemed Necessary by Appellant; Affidavit of Service; Supplementary Designation of Parts of the Record Deemed Necessary by Appellant; and Affidavit of Service which constitute the record on appeal to the United States Circuit Court of Appeals for the Ninth Circuit.

I further certify that my fees for preparing, comparing, correcting and certifying the foregoing record amount to \$14.70 which sum has been paid to me by appellant.

Witness my hand and the seal of said District Court this 18 day of April 1945.

EDMUND L. SMITH,

(Seal)

Clerk

By Theodore Hocke,

Chief Deputy Clerk.

[Endorsed]: No. 11040. United States Circuit Court of Appeals for the Ninth Circuit. First National Benefit Society, Appellant, vs. Maynard Garrison, Insurance Commissioner of the State of California, and H. F. Risbrough and Mae Barr Long, Deputy Insurance Commissioners of the State of California, Appellees. Transcript of Record. Upon Appeal from the District Court of the United States for the Southern District of California, Central Division.

Filed April 20, 1945.

PAUL P. O'BRIEN,

Clerk of the United States Circuit Court of Appeals for
the Ninth Circuit.

In the United States Circuit Court of Appeals
for the Ninth Circuit

No. 11040

FIRST NATIONAL BENEFIT SOCIETY, a Corporation,

Appellant,

vs.

MAYNARD GARRISON, Insurance Commissioner of
the State of California, and H. F. RISBROUGH,
MAE BARR LONG, Doe I, Doe II, Doe III, Deputy
Insurance Commissioners of the State of California,
and ALVIN J. O'LEIN, and Doe IV and Doe V,

Appellees.

ADOPTION OF STATEMENT OF POINTS TO BE
RELIED UPON ON APPEAL.

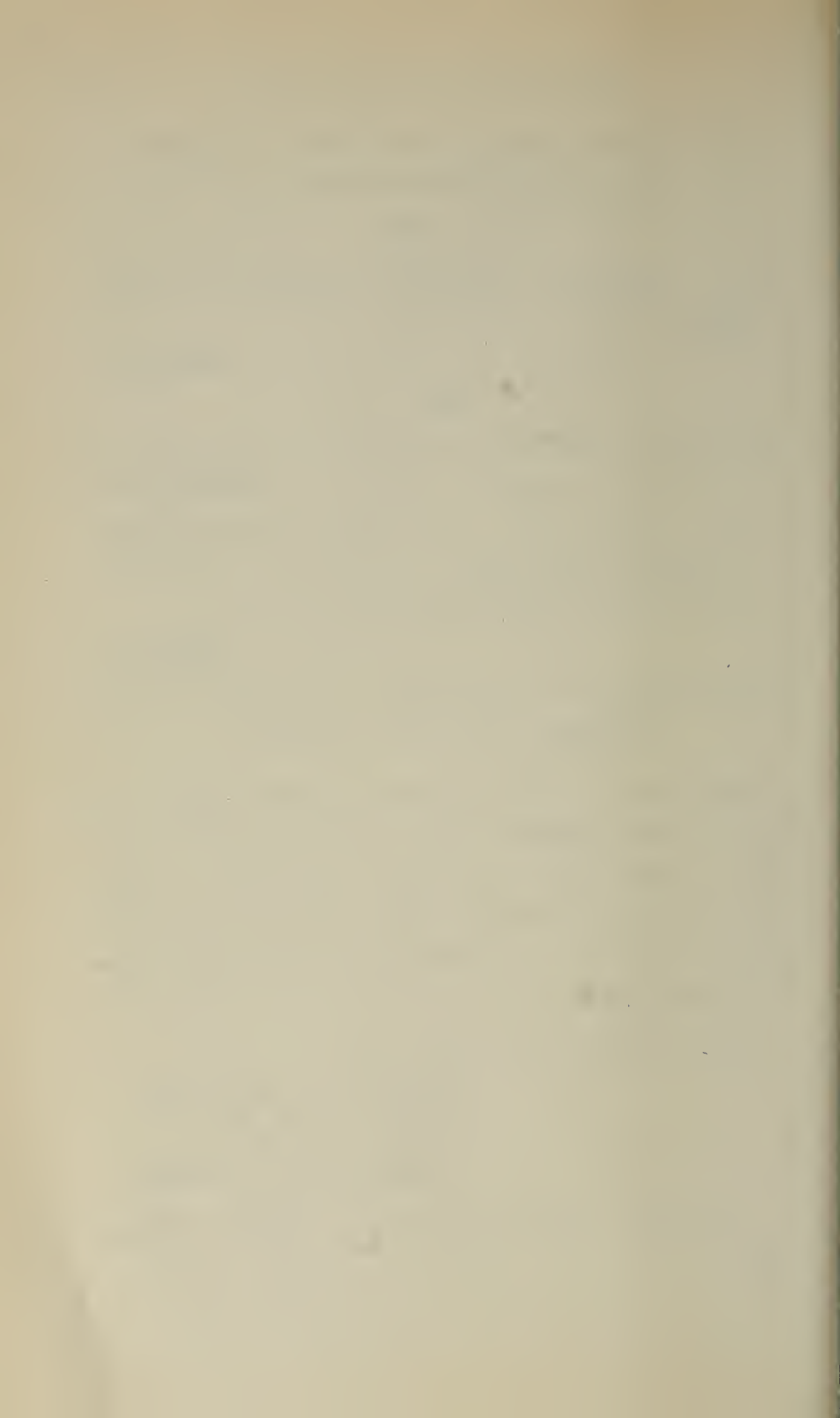
Comes now the First National Benefit Society, the
Above named Appellant, and by and through its attor-
neys of record herein, states that they adopt the State-
ment of Points to be Relied Upon on Appeal, filed with the
clerk of the trial court as its Points to be Relied Upon
On Appeal herein.

Dated the 24 day of April, 1945.

ROBERT R. WEAVER
EARL BLODGETT

Attorneys for Appellant

[Endorsed]: Filed Apr. 30, 1945. Paul P. O'Brien,
Clerk.



No. 11040.

IN THE

United States Circuit Court of Appeals
FOR THE NINTH CIRCUIT

FIRST NATIONAL BENEFIT SOCIETY,

Appellant,

vs.

MAYNARD GARRISON, Insurance Commissioner of the State
of California, and H. F. RISBROUGH and MAE BARR
LONG, Deputy Insurance Commissioners of the State
of California,

Appellees.

APPELLANT'S OPENING BRIEF.

Upon Appeal from the District Court of the United States
for the Southern District of California,
Central Division

FILED

JUN 22 1945

FALL P. O'BRIEN,
CLERK

ROBERT R. WEAVER,

404 First National Bank Building, Phoenix, Arizona,

EARL BLODGETT,

417 South Hill Street, Los Angeles 13, Calif.,

Attorneys for Appellant.

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No. 11040.

IN THE
United States Circuit Court of Appeals
FOR THE NINTH CIRCUIT

FIRST NATIONAL BENEFIT SOCIETY,
Appellant,
vs.

MAYNARD GARRISON, Insurance Commissioner of the State
of California, and H. F. RISBROUGH and MAE BARR
LONG, Deputy Insurance Commissioners of the State
of California,

Appellees.

APPELLANT'S OPENING BRIEF.

Statement of the Pleadings.

1. Jurisdiction.

The basis upon which it is contended that the District Court had jurisdiction and that this Court has jurisdiction upon appeal to review the judgment of dismissal herein is as follows:

Plaintiff has complained that defendants have interfered. and unless restrained, will continue to interfere with the rights of plaintiff in violation of Art. 1, Sec. 8, Para. 3. known as the Commerce Clause, of the Constitution of the United States, and in violation of its rights under the Fourteenth Amendment thereto. Under the pleadings

herein there is involved the validity of Sections 703(a) and 1642 of the Insurance Code of the State of California, and the rights of plaintiff under the above provisions of the Constitution of the United States, and the amount of damage involved is more than \$3,000.00. The said matters therefore involve a Federal question within the jurisdiction of the district Court and of this Court on Appeal.

2. Statutory Provisions.

The statutory provisions believed to sustain the jurisdiction are as follows:

U. S. C. A., Title 28, Para. 41 (1), under which Federal District Courts are given original jurisdiction of all suits arising under the Constitution of the United States or the laws of the United States or treaties made or which shall be made under their authority.

3. Abstract of the Pleadings.

The Complaint alleges that the Plaintiff and Appellant herein is a non-profit corporation, organized and existing under and by virtue of the mutual benefit corporation laws of the State of Arizona and operating by the authority of the Corporation Commisison of the said state, [Tr. Rec., p. 2].

That the said plaintiff has many members in the State of California. That many of them were acquired by application by mail to the home office. That many of them were acquired by contract of assumption from California corporations, and that all applications for membership are forwarded to the home office in Phoenix, Arizona and are there accepted or rejected, and that all premiums, dues and assessments are paid direct to the home office in

Phoenix, Arizona. [Tr. Rec., p. 3]. That appellant has many members in the State of California who acquired their policies while living in Arizona and thereafter removed to the State of California, [Tr. Rec., p. 10].

That the plaintiff has never maintained an office or agency in the State of California and has never done business in the State of California, [Tr. Rec., p. 3].

That plaintiff and appellant has corresponded with applicants in the State of California. That plaintiff has upon many occasions received inquiries from persons residing in the State of California in regard to its insurance policies or benefit certificates and has thereupon sent its representatives, also members of the said Society, to call upon persons making such inquiries. That applications have been signed by the said residents of California and thereupon forwarded to the home office for acceptance or rejection. That upon acceptance of the said applications, the policies are issued at the home office at Phoenix, Arizona, and mailed direct to the insured with notice to pay all premiums at the home office, [Tr. Rec., p. 3 and 4].

That complaint further states that after such a transaction with one Alvin J. O'Lein, the latter, acting under the instructions and request of Maynard Garrison, Insurance Commissioner, acting through his deputies, filed a complaint against the said representative, F. O. Robertson, charging the said representative with selling insurance in the State of California without a license and with aiding a non-admitted insurer to transact insurance business in the State of California. and that the said F. O. Robertson was arrested in accordance with the said complaint, [Tr. Rec., p. 4 and 5].

The complaint further alleges that the defendants under claim of right but actually without right and in violation

of the Commerce Clause of the Constitution of the United States and repugnant to the Fourteenth Amendment thereof, has interfered with the representatives of the plaintiff and threatened them with prosecution, and has ordered the said persons not to assist in such transactions for plaintiff and sets forth the names of the persons so interfered with and ordered not to so assist in such transactions and alleges that the said assistance rendered by these agents is but one step in a chain of events constituting interstate transactions, [Tr. Rec., p. 5].

The complaint alleges that Plaintiff has no plain, speedy or adequate remedy at law and that pecuniary compensation would not afford adequate relief and sets forth the reasons therefor, [Tr. Rec., p. 5 and 6].

The complaint then sets forth a second cause of action, alleging that the defendants have interfered with and disturbed the members of the First National Benefit Society, and alleges that the defendants have advised said members to sever connections with the said Society and forfeit their certificates therein; and that the defendants have advised members of the said Society that their certificates were "illegal" and that they were "not worth the paper they are written on," and that the said defendants had entered upon a campaign of molestation and interference with the members of the said plaintiff and alleges that the said certificates issued by the plaintiff are *legal* and authorized by law and that the statements of the defendants are false and untrue and are known by them to be false and untrue, [Tr. Rec., p. 6 and 7].

Complaint further alleges that Plaintiff has members in the State of California who obtained their insurance policies in the State of Arizona and removed to the State of California and that the defendants have interfered with

the said members and have advised them that their certificates were unlawful and illegal and of no value whatsoever, [Tr. Rec., p. 10].

The said complaint sets forth a series of acts of the defendants, interfering with plaintiff's members and counseling them to discontinue their insurance certificates with plaintiff, and advising the said members that they could not collect on plaintiff's policies in case of loss, and advising them to insure with a California corporation, and inflicting damage upon the plaintiff in excess of \$3,000.00. [Tr. Rec., p. 8, 9, and 10], and that the said plaintiff had lost ten thousand of its California members, involving an annual dues loss of \$240,000.00 by reason of the alleged acts, conduct, matters and things done by the defendants. [Tr. Rec., p. 10, para. VII].

The Complaint alleges that there is no provision for the admission of plaintiff to do business in the State of California, and that it is prohibited from doing business in that state, but that there is a provision for the regulation of local insurance companies of the same type and that the defendants have been and are continuing to discriminate against plaintiff, [Tr. Rec., p. 6].

Plaintiff asks for an injunction restraining the defendants from doing any of the said acts and for damages already sustained, [Tr. Rec., p. 11].

Defendants filed a Notice of Motion to Dismiss; and Motion for More Definite Statement upon the following grounds:

- (a) No substantial Federal question is presented;
- (b) The matter in controversy arises under the laws of the State of California;
- (c) Assuming plaintiff to be engaged in interstate commerce, since Congress has not legislated in

the field plaintiff has failed to comply with valid regulations of the State of California;

(d) The State of California has not consented to be sued;

(e) The amount in controversy is less than \$3,-000.00, exclusive of interest and costs. [Tr. Rec. p. 13].

Filed with this Motion to Dismiss was the Motion for More Definite Statement; the matter, however, was disposed of on the Motion to Dismiss.

Plaintiff filed Points and Authorities in Opposition to Defendant's Motion to Dismiss and/or Motion for More Definite Statement. The matter was argued and briefed and a judgment of dismissal ordered by the Court and filed herein.

The Court apparently rendered its opinion granting the Motion to Dismiss on two general grounds.

FIRST, that the acts of the defendants did not violate the rights of the plaintiff under the Commerce Clause of the Constitution of the United States or the Fourteenth Amendment thereto.

SECOND, that the action was one against the State of California, and not against the individual officers named as defendants, without obtaining the consent of the State and contrary to the Eleventh Amendment to the Constitution.

Although the Court, in its decision, under the heading of factual situation, [Tr. Rec., p. 23], has recorded certain of the allegations of appellant's second cause of action, which deals with interference of appellant's policyholders, there is no disposition of such situation in the Opinion itself. There is no later discussion upholding or condemning the alleged action of the defendants' interfering with the appellant's policyholders legally obtained.

Assignments of Error.

Appellant's Assignments of Error follow its Statement of Points to be Relied Upon on Appeal.

A.

The Court erred in dismissing the action for the reason that the allegations in the complaint set forth a Federal question within the jurisdiction of the trial Court and within the appellate jurisdiction of this Court for the reason that the question involved arises under the provisions of the Constitution and laws of the United States and involves the rights of the plaintiff and appellant thereunder.

1. The allegations of the Complaint set forth a Federal question within the jurisdiction of the trial Court.

2. The Plaintiff is entitled to an Injunction against the defendants and each of them pending the determination of such Federal question.

3. The Complaint complains of acts which violate the fundamental rights of the Plaintiff under the Fourteenth Amendment to the Constitution.

4. The acts of the Defendants complained of in the said Complaint are calculated to and will destroy the business of the Appellant already on its books and legitimately acquired.

5. The action is not one against the State of California, but is an action seeking an Injunction against acts of the Defendants performed under color of a State law void in its application to the facts stated in the Complaint and the determination thereof involved a Federal question.

B.

The Court erred in dismissing the action for the reason that the acts complained of in the said complaint, together with the state laws which they seek to enforce are in conflict with the Commerce Clause of the Constitution of the United States as follows:

1. The Complaint alleges facts in regard to certain transactions of the Plaintiff which constitute (without dispute) interstate commerce.

2. The acts of the Defendants complained of in the Complaint are done under the supposed authority of State laws which are extra-territorial in effect and which assume to regulate Plaintiff's business in the State of its organization and incorporation, and in all states in which it does business.

3. The acts of the Defendants complained of place an undue burden on interstate commerce.

4. The acts of the Defendants and each of them prohibit Plaintiff from completing any interstate transaction with any citizen of the State of California.

5. The acts of the Defendants complained of in the Complaint require the Plaintiff to obtain a license to enter into an interstate transaction with a citizen of the State of California.

Summary of Argument.

In this argument we shall follow an outline as set out in the Statement of Points to be Relied Upon on Appeal in the Transcript herein, [Tr. Rec., p. 67-68], and in our Assignments of Error, which we summarize as follows:

A.

1. The allegations in the complaint set forth a Federal question within the jurisdiction of the trial Court and within the appellate jurisdiction of this Court for the reason that the question involved arises under the provisions of the Constitution and laws of the United States and involves the rights of the plaintiff and appellant thereunder.

2. Plaintiff is entitled to an Injunction against the defendants, and each of them, pending the determination of such Federal question.

3. The complaint complains of acts which violate the fundamental rights of the Plaintiff under the Fourteenth Amendment to the Constitution of the United States in that it is excluded from doing business in the State of California under any circumstances, and from completing any interstate transactions with its citizens.

Complaint further complains that the defendants have interfered with its members and policyholders, even those acquired by transactions through the mail, by reinsurance contracts with California corporations, and those, who having obtained life insurance contracts with Plaintiff, had thereafter removed to the State of California, [Tr. Rec., p. 6, 7, 8, 9, and 10].

4. It is also alleged by the appellant that since a large number of its policyholders are in the State of California, that the continued campaign of the defendant to eradicate policies largely acquired from the corporation will weaken

its entire structure and threatens to destroy the corporation itself.

5. This action is not one against the State of California, but is seeking an Injunction against the defendants and appellees for two reasons:

First, that they are seeking to enforce invalid laws of the State of California, and

Second, that whether such laws are invalid or not, that the acts of the appellees and defendants in administering such laws are in violation of the rights of this plaintiff and its members.

Since the question as to whether or not such an Injunction suit is one against the State or one against the individual officers does not depend so much upon reference to the nominal parties on record, but is determined by a consideration of the nature of the case as presented on the whole record (as set forth in the Opinion in the Court below, Tr. Rec., p. 58 at the top of the page), and since the question is to depend chiefly upon whether or not there has been a violation of plaintiff's rights to its irreparable damage (as set forth in the Opinion of the Court below, Tr. Rec., p. 62), then such question will also depend upon the decision as to the main point in issue which follows.

B.

The acts complained of in the said complaint, together with the State laws which they seek to enforce are in conflict with the Commerce Clause of the Constitution of the United States as follows:

1. The facts alleged by the complaint (apparently without dispute), constitute a series of interstate transactions, which amount to interstate commerce. The only basis

upon which the acts of the defendants complained of could be upheld as valid under the Constitution of the United States would be that the said acts were done in enforcing a valid state law which does not discriminate against plaintiff and where the acts themselves are not in violation either of the Commerce Clause or the Fourteenth Amendment to the Constitution of the United States.

2. Such regulation of interstate commerce could only be valid where its application is purely local in effect, and could not be upheld where either the state laws or the acts of the officers themselves are extra-territorial in effect, or anything more than purely local in application and whereas, in the instant case, these regulations reach out across state lines and attempt to regulate insurance business in other states they are in violation of the constitutional provisions.

3. The acts of the defendants complained of and the laws under which they were performed have always been held by the Supreme Court of the United States to be an undue burden on interstate commerce when applied to any other type of interstate commerce.

4. The acts of the defendants complained of, and the laws under which they were performed prohibited plaintiff from completing any insurance contract with a citizen of the State of California and are taking away from the plaintiff's Society those contracts which it already has with such citizens.

5. The acts of the defendants complained of and the laws under which they were performed require plaintiff to obtain a license or the permission of the State of California to enter into an interstate transaction with a citizen of that state. The decisions of the Supreme Court up-

holding the rights of the states in regard to importation and regulation of the distribution of certain products, even dangerous products, within its borders have never gone so far as to uphold a requirement that any one engaged in interstate commerce must obtain a license so to do, but have only upheld the regulation after the interstate transaction has ceased and the article is ready for distribution intrastate.

Argument.

A.

1. The determination as to whether or not a Federal question is involved depends largely (as does the question as to whether the suit is against the state or against the individual officers) upon whether or not the acts of the defendants and the laws of California complained of constitute a violation of appellant's rights under the Fourteenth Amendment to the Constitution and whether or not they constitute an undue burden upon, or interference with, or regulation of, interstate commerce in conflict with the provisions of the Commerce Clause of the United States Constitution. If these questions are determined in the affirmative, then there would be no doubt as to a Federal question being involved.

Art. 1, Sec. 8, para. 3 (known as the Commerce Clause) of the United States Constitution.

The Fourteenth Amendment to the Constitution of the United States.

U. S. C. A., Title 28, para. 41 (1).

2. Plaintiff is entitled to an Injunction against the defendants, and each of them, pending the determination of the Federal question, even though it has not been de-

terminated whether or not the acts complained of are in violation of plaintiff's right under the Constitution.

"Although a state may not be sued without its consent nevertheless, a state officer acting under color of his official authority may be enjoined from carrying into effect a state law asserted to be repugnant to the Constitution of the United States, *even though such injunction may cause the state law to remain inoperative until the constitutional question is judicially determined*. The doctrine is elementary but we refer to a few of the leading cases by which it is sustained: *Penoyer v. McConnaughty*, 140 U. S. 1, 11 S. C. 699, 35 L. Ed. 363; *Regan v. Farmer's Loan & Trust*, 154 U. S. 362, 14 S. C. 1047, 38 L. Ed. 1014; *Ex parte Young*, 209 U. S. 123, 28 S. C. 441, 52 L. Ed. 714; *Princess v. Atlantic Coast Line Co.*, 211 U. S. 210, 29 S. C. 67, 53 L. Ed. 150; *Home Tel. & Tel. v. Los Angeles*, 227 U. S. 278, 33 S. C. 312, 57 L. Ed. 510; *Greene v. Louisville & Interurban R. Co.*, 244 U. S. 499, 37 S. Ct. 673, 61 L. Ed. 1280."

3 and 4. We believe that there was some misunderstanding of our position by the court below in regard to the contention that the acts of the defendants and appellees were in violation of plaintiff's rights under the Fourteenth Amendment.

There are two causes of action set forth in the complaint.

The *first* deals with interference with the agents of the plaintiff and is concerned chiefly with an interference with plaintiff's interstate transactions amounting to interstate commerce.

The *second* complains of interference with the policy-holders and members of plaintiff and appellant, legitimately on its books.

The said second cause of action complains of the invasion of the property rights of this plaintiff and appellant beginning at the middle of page 10 of the Transcript of the Record in the following language:

“* * * many of which people took their policies in the State of Arizona and upon their removal to the State of California or change of residence the said (9) California insurance Commissioner, acting through his deputies, interfered with said people and advised them that their certificates were unlawful and illegal and of no value whatsoever and that they should drop them and insure in a company qualified in the State of California.”

The complaint under this cause of action, beginning on page 6 of the Transcript of the Record, sets forth a series of acts of the defendants interfering with the policyholders of the plaintiff, telling them that their contracts are illegal, that they could not recover in case of loss, that they are not worth the paper they are written on, and advising them to drop these insurance policies and insure with a California insurer.

These allegations set up a plain case of invasion and destruction of the property rights and business of the plaintiff and appellant and there is no legal basis upon which such acts could be justified either under color of law or upon the initiative of the officers themselves and the allegation follows that the damage is in excess of \$3,-000.00, and that many thousands of members have dropped their insurance on account of such acts. Plaintiff was entitled to a trial of these statements in the lower court.

5. This action is not one against the State of California, but against the officers who are made defendants.

It is primarily a suit for an Injunction.

We believe that the statement of the Court below in its Opinion is correct insofar as it states, that if taking the entire complaint into consideration, the acts of the defendants complained of, and the law under which they were performed are unconstitutional, the action is not one against the state but against the individual officers, while on the other hand, if the officers are legally administering a constitutional statute and in no way violating the Constitution or laws of the United States, it would be a suit against the state.

Gunter v. Atlantic Coast Line R. Co., 200 U. S. 273, 283;

Prout v. Starr, 188 U. S. 537;

Reagan v. Farmer's Loan and T. Co., 154 U. S. 362;

Opinion of the Court Below, Tr. Rec., p. 61, 62.

If this then is the law (and the cases appear to be agreed that it is), this point is of no value in determining whether or not plaintiff and appellant is entitled to maintain this action, for the decision in that matter would follow the court's decision upon the constitutionality of the law involved and the illegality of the acts of the defendants thereunder.

In cases where the state officers have attempted to enforce an unconstitutional law or to administer a valid law wrongfully, their acts have been held to be so disassociated from the state for which they purport to act, so as to permit a suit to be brought against them with respect to those acts.

Ex parte Young, 209 U. S. 123, 28 S. Ct. 441, 52 L. Ed. 714, 13 L. R. A., N. S., 932, 14 Ann. Cas. 764;

Greene v. Louisville & Interurban R. R. Co., 244 U. S. 499, 37 S. Ct. 673, 61 L. Ed. 1280.

The cases seem to be in agreement upon the proposition that so long as an officer is acting under the authority of a valid law, and not acting beyond his authority of that law, his acts constitute the acts of the state; but if he is acting under the color of an unconstitutional law or acting beyond the authority of any law, his acts are so disassociated from the state that an action may be maintained against him individually.

Since there appears to be no dispute in this situation, and since the determination of the constitutionality of the laws involved and the validity of the acts of the defendants under the Constitution of the United States determine this question, upholding or not upholding the right of action at the same time that it decides for or against the sufficiency of the complaint itself, this point becomes more or less academic, and upon the determination of the case on its merits would become a moot question.

B.

1. The transactions of the appellant set forth in the complaint constitute interstate commerce.

United States v. Southeastern Underwriters Assn.,
64 S. Ct. 1162, 88 L. Ed. 1082, 322 U. S. 533;
Opinion of the Court Below, Tr. Rec., p. 24.

There could be no doubt that the transactions of the appellant, which it alleges were interfered with by the defendants, are interstate transactions. The completion of one such transaction required at least five transmissions across the state line, and since insurance is now commerce under the decision of *United States v. Southeastern Underwriters Assn.*, *supra*, it must, when transacted across state lines, be interstate commerce. The fact that

these transactions do constitute interstate commerce has not been disputed in this matter.

2. This subdivision of our points to be relied upon deals with the main issue involved. If the regulatory laws of the State of California and the acts of its officers had reference only to the regulation of business to be conducted in California, we would not now be before this Court nor engaged in this litigation, but it has made as a preliminary to such qualification, the submission of appellant's business in every state in which it operates to the regulation of California. Unless a different and special rationale and reasoning in regard to interstate transactions is to be applied to insurance than has been applied to other types of interstate commerce, then the laws of the individual states and the acts of their officers must conform to principles well established by the Supreme Court.

Under a long line of decisions it has universally been held in all types of interstate commerce, other than insurance, that so long as an agent was engaged in interstate commerce he would not be required to obtain a license from the state in which he solicits business.

In 1869 a man by the name of Paul was arrested in Virginia for soliciting insurance without a license. In order to uphold this state requirement, the Supreme Court of the United States held that insurance was not commerce and hence could not be interstate commerce.

Paul v. Virginia, 8 Wall. 168.

This case was followed by a number of decisions upholding the rights of the states in this respect but never based upon any other proposition than the following of the case of *Paul v. Virginia*, *supra*.

Now, after seventy-five years, the Supreme Court, in applying the Sherman Anti-Trust Act to the Southeastern Underwriters Association, has reversed the old case of *Paul v. Virginia*, and held that "insurance is commerce and where conducted across state line is interstate commerce."

It is then, the effect which this decision may have upon the right of the states to regulate this field of interstate commerce which is involved in this case.

This matter is of outstanding interest to the insurance business of this country. The effect of the *Southeastern Underwriters Association* case has been commented on by Hugh Evander Willis, noted authority on Constitutional Law and author of the standard work, "Constitutional Law of the United States." In the Insurance Law Journal, successor to Insurance Decisions, published by the Commerce Clearing House, in an article beginning on page 390 of the July 1944 issue, at page 393, he makes the following observation:

"Effect of Decision. The first and most lasting effect of this decision will be to give all insurance companies the benefit of the equality clause. This result will follow from making insurance interstate commerce, so as to give insurance companies the right to do business in every state without consenting to conditions of states for the privilege of entering the states. This will mean the stopping of all discriminations by the states under their tax power and police power against foreign insurance companies. This is a result that Congress cannot change because when the Supreme Court defines commerce its definition becomes a part of the Constitution and Congress cannot amend the Constitution."

The decisions in *United States v. Southeastern Underwriters Association*, 64 S. Ct. 1162, 88 L. Ed. 1082, 322 U. S. 533.

The opinion of the Court, delivered by Mr. Justice Black, is preceded by the statement that the old cases that followed *Paul v. Virginia*, *supra*, were testing the validity of state laws, while the case at bar was testing the validity of a Federal law as applied to the insurance business. In this case the argument was presented by the defendant that if the Court held that insurance was commerce then *all* state regulation would fall. We quote the language of the Court as follows:

“Accepted without qualification, that broad statement is inconsistent with many decisions of this Court. It is settled that for Constitutional purposes, certain activities of a business may be intrastate and therefore subject to state control, while other activities of the same business may be interstate and therefore subject to federal regulation. And there is a wide range of business and other activities which though subject to federal regulation, are so intimately related to local welfare that, in the absence of Congressional action, they may be regulated or taxed by the states.”

The Court in its statement that such a contention if “accepted without qualification” would be contrary to many decisions of the Supreme Court and in stating that “it is a settled fact, for constitutional purposes, certain activities of a business may be intrastate and therefore subject to state control, while other activities of the same business may be interstate and therefore subject to federal regulation,” made quite clear that the Court’s distinction between that phase of the business which could be regulated

by the states and that which is reserved for federal regulation is to be found in the cases already in existence.

The Court cites two definite lines of cases showing a definite line of distinction between these two phases and clearly indicating that in the Opinion of the Court, the division between state and federal regulation lies directly between these two lines of cases.

Representative of the cases cited by the Supreme Court which set out a phase of interstate commerce subject only to federal regulation the Court itself cites: *Crutcher v. Kentucky*, 141 U. S. 47. This case, after stating that it was the undoubted province of the state legislatures to make regulations with regard to the speed of railroad trains in the neighborhood of cities and towns, with regard to precaution to be taken in the approach of such trains to bridges, tunnels, dips, cuts, and sharp curves and so forth, the Court nevertheless held that the law of Kentucky was unconstitutional for the reason that it required that a license be obtained before entering into interstate business. The decision of the Court in this case is very well stated in the syllabus as follows:

“*Crutcher v. Kentucky*, 141 U. S. 47. The act of the legislature of Kentucky of March 2, 1860, ‘to regulate agencies of foreign express companies,’ which provides that the agent of an express company not incorporated by the laws of that State shall not carry on business there, without first obtaining a license from the State, and that, preliminary thereto, he shall satisfy the auditor of the State that the company he represents is possessed of an actual capital of at least \$150,000., and that if he engages in such business without license he shall be subject to fine, is a regulation of interstate commerce so far as applied to a corporation of another state engaged in that

business, and is, to that extent, repugnant to the Constitution of the United States.”

The next case cited by the Court was *Atlantic Refining Company v. Virginia*, 302 U. S. 22. In stating the facts involved in this case, the Court said:

“First, Virginia recognized the Constitutional right of the company to carry on interstate business without paying an entrance fee. On the other hand, the company conceded that the Federal Constitution does not confer upon it the right to engage in intrastate commerce in Virginia unless it has secured the consent of the State.”

The next case cited by the Court was *McGoldrick, Comptroller of the City of New York v. Berwind-White Coal Mining Company*, 309 U. S. 33, 60 S. Ct. 388, 84 L. Ed. 565, 128 A. L. R. 876.

The gist of this case is that the Supreme Court upheld a sales tax by the city of New York on the purchasers of coal which had been shipped to New York from Pennsylvania. In upholding this tax, the Supreme Court laid emphasis upon the fact that the tax is upon the buyer, the seller being liable only if he fails to collect and pay over.

The above cases were cited by the Supreme Court in support of its statement that certain phases of the business were reserved for Federal regulation. How could the Court have put its position more clearly to the effect that the states could not require permission or license to enter into interstate business as applied to insurance and that state regulations in any manner discriminatory would be invalid.

In the other line of cases cited by the Court which are to the effect that other activities of a business which,

though subject to Federal regulation are so intimately related to local welfare that in the absence of Congressional regulation they may be regulated and taxed by the states, are as follows:

The Court here cites first the old case of *Gibbons v. Ogden*, 9 Wheat. 1 (200) (203) (210), 6 L. Ed. 23.

We shall not presume to give the Court any discourse on the law contained in *Gibbons v. Ogden* which has become practically the foundation of construction where the difference between State and Federal control of interstate commerce is involved. One of the many phases made clear by the Court in this case is that the state may not compel a party to obtain a license or permission to enter into interstate commerce.

Many of the older cases were cited by the Court. Another case cited by the Court as illustrative of the fact that some phases of a business may be subject to state control, while others are subject to Federal control is:

Kelly v. Washington, 302 U. S. 1, 58 S. Ct. 87, 82 L. Ed. 3.

The pertinent part of this case again is well set out in the syllabus. (7) which reads as follows:

"Inspection of the hull and machinery of motor driven tugs, in order to insure safety and seaworthiness, is not a subject as by its nature requires uniformity of regulation, and therefore this field is open to the States in the absence of conflicting federal regulation under the commerce clause. P. 14.

"If, however, the state goes farther and attempts to impose particular standards as to structure, design, equipment and operation, which in the judgment of its authorities may be desirable but which pass beyond what is plainly essential to safety and seaworthiness,

the State may encounter the principal that such requirements, if imposed at all, must be through the action of Congress, which can establish a uniform rule."

In fact all the cases cited by the Court in the *SEUA* case distinguished the sphere of regulation between the states and the federal government upon the basis of sustaining only that state regulation which is local in its application. Following the above quotation from this case, the Court continued:

"In marking out these activities the primary test applied by the Court is not the mechanical one of whether the particular activity affected by the state regulation is part interstate commerce, but rather whether, in each case, the competing demands of the state and national interests involved can be accomplished."

In support of the above statement the Court has cited *Parker v. Brown*, 317 U. S. 341, 63 S. Ct. 307, 87 L. Ed. 315.

This case involves the California law regarding the marketing of raisins on a pro rate basis and was upheld upon the theory that while it, to some extent, affected interstate commerce it was chiefly local in character. The gist of this case is set out by the Court on page 363 of the United States Report as follows:

"Examination of the evidence in this case and of available data of the raisin industry in California, of which we may take judicial notice, leaves no doubt that the evils attending the production and marketing of raisins in that state present a problem local in character and urgently demanding state action for the economic protection of those engaged in one of its important industries."

The next case cited by the Court is *California v. Thompson*, 313 U. S. 109, 61 S. Ct. 930, 85 L. Ed. 1219.

This case involved the California law requiring those engaged in the business of "transportation agent" who solicits or negotiates for the sale of transportation on the public highways of the state to obtain a license insuring his fitness etc. Paragraph One of the Syllabus reads as follows:

"The commerce clause did not wholly withdraw from the states the power to regulate matters of local concern with respect to which Congress has not exercised its power even though the regulation affects interstate commerce."

Beginning on page 114 of the United States Report the Court said:

"The present case is not one of prohibiting interstate commerce or licensing it on conditions which restrict or obstruct it. *Crutcher v. Kentucky*, 141 U. S. 47; *Dahnke-Walker Co. v. Bondurant*, 257 U. S. 282. For here the regulation is applied to one who is not himself engaged in the transportation but who acts only as broker or intermediary in negotiating a transportation contract between the passengers and the carrier. The license required of those engaged in such business is not conditioned upon any control or restrictions of the movement of the traffic interstate but only on the good character and responsibility of those engaged locally as transportation brokers."

The next case cited by the Court to uphold the above statement is *South Carolina State Highway Department v. Barnwell Bros., Inc.*, 303 U. S. 177, 58 S. Ct. 510, 83 L. Ed. 734.

This case upholds a law of South Carolina regulating the use of state highways. It is based upon two propositions: First, that the regulations are merely local in their application and Second, that the regulations apply to the use of highways constructed by the State of South Carolina with its own funds and that to deprive the state of the right to regulate its use when Congress has not acted and when the application is purely local in character would be to allow persons doing an interstate business upon the state's highways actually to use state property without the state having any right to designate the terms of such use for the protection of the highways and the public. The footnote in the *SEUA* case which cites the *South Carolina-Barnwell* case above calls attention to the long list of cases cited in footnote 5 of the latter case.

In fact there is a multitude of cases which uphold the right of the local state to make reasonable regulation of interstate commerce where those regulations are purely local in character and do not restrict, impede, or prohibit such commerce. Again we say "there are no cases which require a person to obtain the consent of the state to do an interstate business."

A reading of the text of *United States v. Southeastern Underwriters Assn.*, *supra*, and the cases cited by the Court in support of its statements can leave but one conclusion as to what the Court had in mind in this regard and that is: *One*, there are some phases of a business which the state may regulate because they are purely intra-state. *Two*, that there are other phases of the same business which are interstate subject to federal control. *Three*, that there are other phases of the same business which although they may constitute interstate commerce their regulation would be purely local in character and would

not restrict or impede interstate commerce which in the absence of federal regulation the states may regulate and that illustrative of the statement that certain phases can only be regulated by the Congress are the cases which hold illegal state statutes which require a license or its permission to do an interstate business and that illustrative of those phases of the business which the states may regulate in the absence of Congressional legislation the Court has cited those cases in which the state laws are purely local in their application or pertain to the use of state property.

Western Union Telegraph Co. v. Kans., 216 U. S. 1, 27;

Fidelity & Deposit Co. of Maryland v. Tafoya, 270 U. S. 246.

3. The acts of the defendants complained of, places an undue burden on interstate commerce, for only those subjects of commerce which are local or limited in their sphere of operation may be regulated by the state until Congress has assumed control, but as to those that are national in their character the power of Congress is exclusive and until Congress acts such commerce is entitled to be free from state exactions and burdens.

Gibbons v. Ogden, 9 Wheat. 1 (222);

Passenger Cases, 7 How. 283, 462;

State Freight Tax Cases, 15 Wall. 232, 279;

Railroad Co. v. Husen, 95 U. S. 465, 469;

Welton v. Missouri, 91 U. S. 275, 282;

Mobile v. Kimball, 102 U. S. 691, 697;

Brown v. Houston, 114 U. S. 622, 631;

Walling v. Michigan, 116 U. S. 446;

Pickard v. Pullman Southern Car Co., 117 U. S. 34;

Wabash and Co. Railway Co. v. Illinois, 118 U. S. 557;

Wagner v. City of Covington, 251 U. S. 95;

Cushman Motor Delivery v. Smith, 1 N. E. (2d) 628;

Buck v. Kuykendall, Director of Public Works, State of Washington, 267 U. S. 307, 45 S. Ct. 324, 69 L. Ed. 623, 38 A. L. R. 286;

Ben Wolf Truck Lines v. Bailey, 1 N. E. (2d) 660;

Detweiler et al v. Welch, Commissioner of Agriculture, State of Idaho, 46 Fed. (2d) 75, 73 A. L. R. 1440.

State regulation of interstate sales of commodities has been upheld only in the case of intoxicating liquors and that only on the authority of the Twenty-first Amendment.

State Board v. Young Market Co., 299 U. S. 59, 57 S. Ct. 77, 81 L. Ed. 38;

Indianapolis Brewing Co. v. Liquor Commission, 305 U. S. 391, 59 S. Ct. 254, 83 L. Ed. 243.

4. The acts of the defendants and each of them prohibit plaintiff from completing any interstate transaction with any citizen of the State of California. A local statute which discriminates, either by way of regulation or taxation, between local companies and those engaged in interstate commerce is void.

Brimmer v. Rebman, 138 U. S. 78, 81;

Fidelity and Deposit Co. of Maryland v. Tafoya, 270 U. S. 246;

Webber v. Virginia, 103 U. S. 344, 26 L. Ed. 65;

Darnell v. Memphis, 208 U. S. 113, 28 S. Ct. 247, 52 L. Ed. 413;

- Walling v. Michigan*, 116 U. S. 446, 6 S. Ct. 454,
29 L. Ed. 691;
Rearick v. Pennsylvania, 203 U. S. 507;
Robbins v. Shelby County Taxing District, 120
U. S. 489;
Caldwell v. N. Carolina, 187 U. S. 622;
South Carolina State Highway Department v.
Barnwell Bros., 58 S. Ct. 510, 303 U. S. 177, 83
L. Ed. 734;
Magnuson v. Kelly, D. C. Ky., 35 F. (2d) 867;
Werner Transportation Co. v. Hughes, D. C. Ill.,
19 F. Supp. 425;
O'Connell v. Kontojohn, 179 S. 802;
Elmer v. Wallace, D. C. Ala., 275 F. 86;
Asher v. Ingels, D. C. Cal., 13 F. Supp. 654;
J. B. Colt Co. v. Melcham, 287 S. W. 1008, 172
Ark. 55;
Park McLain Inc. v. Hoey, D. C. N. C., 19 F.
Supp. 990.

A state or its officers may not interfere with interstate sales, although the law is designed to prevent fraud in the selling of securities which affects securities coming from other states by requiring that persons dealing in them within the state, shall first be licensed, is not invalid as a direct burden on interstate commerce, such a law is only valid where it affects only intrastate sales and does not interfere with interstate sales or shipment of the securities.

- Hall v. Geiger Jones Company*, 242 U. S. 539;
Hatch v. Reardon, 204 U. S. 152;
Ware and Leland v. Mobile Company, 209 U. S.
405;
Angle v. O'Mally, 219 U. S. 128.

5. Where a sale is made by an agent or an order is solicited by him and delivery of the goods in consumation of the sale or in the filling of the order requires their transportation from one state to another the transaction is one of interstate commerce, and the state cannot require a license for such purpose.

Sonneborn Bros. v. Cureton, Tex., 43 S. Ct. 643,
262 U. S. 506, 67 L. Ed. 1095;

Hump Hairpin Mfg. Co. v. Emmerson, Ills., 42 S.
Ct. 305, 258 U. S. 290, 66 L. Ed. 622;

Western Oil Refining Co. v. Lipscomb, Tenn., 37
S. Ct. 623, 244 U. S. 346, 61 L. Ed. 1181;

*Chicago Portrait Co. v. City of Bellingham, Wash.,
D. C.*, 270 F. 584;

City of Roanoke v. Stewart Grocery Co., 176 S.
820;

Sillin v. Kesseg Ellis Drug Co., 26 S. W. (2d) 122,
181 Ark. 3867;

L. D. Powell Co. v. Rountree, 247 S. W. 389, 157
Ark. 121, 30 A. L. R. 414;

Charlton Silk Co. v. Jones, 212 P. 203, 190 Cal.
341;

W. W. Kimball Co. v. Read, 185 P. 192, 43 Cal.
App. 342;

*Wilmington Dry Goods Co. v. Nat'l. Automatic
Mach. Co. Super*, 190 A. 735;

Mergenthaler Linotype Co. v. Gore, 160 S. 481,
118 Fla. 889;

Wilk v. City of Barstow, 97 S. 307, 86 Fla. 186;

Crumph v. McCord, 113 S. E. 534, 154 Ga. 147;

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261 Ills. App. 327;

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- Higgin Mfg. Co. v. Foreman Bros. Banking Co.*,
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Brennan v. Titusville, 153 U. S. 289;
Texas Transport Co. v. New Orleans, 264 U. S.
150;
*Alpha Portland Cement Co. v. Commonwealth of
Mass.*, 268 U. S. 203;
Schaffers v. Farmers Grain Co., 268 U. S. 189;
Lemke v. Farmers Grain Co., 258 U. S. 50;
Buck Stone Co. v. Vicara, 226 U. S. 205;
Stewart v. Michigan, 232 U. S. 665;
Crenshaw v. Arkansas, 227 U. S. 389.

The Opinion of the Court below sets out in substance appellant's position, [Tr. Rec., p. 27-30], and we submit to this Court that this is not an attempt by a foreign insurance company to transact business in the State of California without meeting the standards of safety set by that

state, but is rather a determination as to whether or not the State of California or any state can reach out across its state lines and regulate the corporate structure, the actuarial standard, and even the bookkeeping basis as well as complete regulation of such foreign company's business in every state in the Union, for the privilege of transacting an interstate business with the citizens of California or the state attempting to so regulate, even though such business may be small in comparison to the company's business elsewhere.

This case does not present the question as to whether or not the laws of California will be nullified but as to whether the State of California can nullify the laws of every other state in the Union if the companies organized in those states are to do an interstate business with the citizens of that state.

It should be borne in mind that there is no showing that appellant and plaintiff does not meet all the requirements of the State of California for doing business therein.

The sections under which the agent, F. O. Robertson, was arrested are 703(a) and 1642 of the California Insurance Code, which provide as follows, respectively:

“703. Except when performed by a surplus line broker, the following acts are misdemeanors when done in this State:

(a) Acting as agent for a nonadmitted insurer in the transaction of insurance business in this State.”

and

“1642. A person shall not act as an insurance agent, broker, or solicitor until a license is obtained from the Commissioner, authorizing such person so to act.”

It has been contended by the defendants that there is no descrimination against plaintiff in their conduct and in the enforcement of the California statutes. Section Number 10818 of the California Insurance Code reads as follows:

“10818. On and after January 1, 1940, no new insurer may be organized or admitted to operate under this chapter. Nothing herein contained shall prohibit an insurer theretofore existing under or by virtue of this chapter from transforming to an insurer operating under the provisions of Chapter 9a of this part nor shall anything herein contained prohibit an association now operating under Chapter 8 of this part from transforming to an insurer operating under this chapter at times and in the manner provided in Chapter 8. Any corporation formed pursuant to section 10815, which, prior to January 1, 1940, exhibits proof satisfactory to the commissioner that it has procured one hundred subscribers or applicants who have each paid the required initial premium, and which also deposits with the commissioner on or before January 1, 1940, the sum of \$1,000 as a payment on its statutory deposit, may be admitted on completion of its organization and statutory deposit on or before July 1, 1940.”

The provisions of this chapter from Section 10810 to Section 10928 in the California Insurance Code are the provisions regulating companies similar to the appellant and prohibiting appellant from doing business in the State of California. It is true that it also prohibits new insurers in that state thereby creating a monopoly for the companies still doing such business within that state. As set out by the Court below, the defendants have contended that Appellant could qualify to do business in the State of

California, and cites Section 10510 of the California Insurance Code requiring a \$200,000.00 deposit, which section appears in the same chapter providing for extended insurance and cash surrender values, none of which provisions could appellant legally comply with in the state of its organization, nor could any similar company comply with them in the State of California. No state in the Union requires a \$200,000.00 deposit for a mutual benefit society and the maximum deposit for such a company in California is \$25,000.00. Defendant's contention then that appellant could comply with the law of California amounts to saying that if it will violate the law of Arizona and of California governing mutual benefit societies, or if its officers will organize a new company with its insurance structure on an entirely different basis, and reinsure appellant therein and then cease to exist, its successor, a new corporation, could do business in the State of California.

In closing this argument, we wish to call the Court's attention to *State Farm Mutual Auto Insurance Company v. Duel*, 88 L. Ed. 481. This case involved a situation where the appellant had applied for a license to do business in the State of Wisconsin, and where the license was denied by the State of Wisconsin on the ground that its reserves in the State of Illinois were less than those required by Wisconsin.

Two contentions were made in the lower Court. (1) That this requirement was in violation of the Due Process Clause of the Constitution, and (2) that it was in violation of the Full Faith and Credit Provision of the Constitution. The *Southeastern Underwriters Association* case, *supra*, having been decided after the decision in the Court below, appellant raised the question of interference with interstate commerce in the United States Supreme Court.

The Court held that the first two contentions were not well taken. The third contention was disposed of by stating that since the appellant had not raised the matter in the lower Court and still had the opportunity of raising it, it would require that it first be disposed of by the lower Court. The Supreme Court entered into considerable discussion of the appellant's right to come back into the Supreme Court and test the question of the interference with interstate commerce and specified the *SEUA* case, *supra*, as an intervening event changing the situation, which would not leave the matter *res adjudicata* by affirmation of the lower Court's judgment, thereby recognizing that a changed condition now exists in regard to state regulation of interstate insurance business. It should be noted also that the appellant in the above case had applied for a license to actually "do business" within the State of Wisconsin, while in the case before this Court, the matter involved is the interference with interstate transactions. In disposing of this matter on the two grounds that Wisconsin was not violating the Due Process of Law Clause and the Full Faith and Credit Clause of the Constitution, the following statement was made by the Court:

"If a state undertook to regulate out of state activities through such a requirement different questions would be posed."

We submit therefore that where the acts of the defendants and the law under which they presume to act

(1) Prohibits the plaintiff and appellant from making any interstate transaction with a citizen of California under any circumstance.

(2) Attempts to regulate plaintiff's activities in the state of its incorporation and in every state in which it does business.

(3) Attacks and seeks to destroy plaintiff's contracts held with citizens and residents of California legally acquired.

(4) Enters into a campaign of molestation not only with plaintiff's and appellant's agents, but with its members:

That the said acts and the law under which they presume to be performed are in violation of the Commerce Clause of the United States Constitution and the Fourteenth Amendment thereto, and that the judgment of dismissal of the Court below should be dismissed and the case remanded to the trial Court for trial of the issues presented in appellant's Complaint on file herein.

Respectfully submitted,

ROBERT R. WEAVER,
EARL BLODGETT,

Attorneys for Appellant.

No. 11,040

IN THE

United States Circuit Court of Appeals

For the Ninth Circuit

FIRST NATIONAL BENEFIT SOCIETY,

Appellant,

VS.

MAYNARD GARRISON, Insurance Commissioner of the State of California, and
H. F. RISBROUGH and MAE BARR LONG,
Deputy Insurance Commissioners of the
State of California,

Appellees.

BRIEF FOR APPELLEES.

ROBERT W. KENNY,

Attorney General of the State of California,

T. A. WESTPHAL, JR.,

Deputy Attorney General of the State of California,

600 State Building, San Francisco 2, California,

Attorneys for Appellees.

FILED

AUG 22 1945

PAUL P. O'BRIEN,
CLERK

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No. 11,040

IN THE

United States Circuit Court of Appeals

For the Ninth Circuit

FIRST NATIONAL BENEFIT SOCIETY,

Appellant,

vs.

MAYNARD GARRISON, Insurance Commissioner of the State of California, and
H. F. RISBROUGH and MAE BARR LONG,
Deputy Insurance Commissioners of the
State of California,

Appellees.

BRIEF FOR APPELLEES.

NATURE OF THE CASE.

This is an appeal from a decision of the United States District Court for the Southern District of California, Central Division, declaring in effect that an insurance company organized and operating in another state may not transact business in California without meeting the standards of safety prescribed by the State of California for foreign and domestic insurers, nor may their agents operate in California without securing a license designed to insure that such persons will be men of good moral character.

If appellant had been successful in the Court below, or is successful in this Court, it would mean that appellant, or any insurance organization, by the expedient of operating from another state may nullify California's insurance laws in existence for many years, and established to assure that insurers are financially able to meet their contractual obligations to insured persons in this State, and that insurance agents operating in this State are persons of decent moral character and honesty. Appellant seeks to nullify California's regulatory statutes in this regard by attempting to interpret the case of *United States v. South-Eastern Underwriters Assn.*, 64 S. Ct. 1162, 88 L. Ed. 1082, decided by the United States Supreme Court on June 5, 1944, as having the effect of voiding all such state regulatory legislation when applied to foreign companies, which legislation is enacted under the State's police power.

We believe that we can demonstrate that appellant's contention is groundless and that it cannot prevail in this appeal.

STATEMENT OF THE CASE.

The complaint in this case is in two counts. In the first cause of action appellant alleges that it is a non-profit corporation and a mutual benefit society organized and existing under and by virtue of the laws of the State of Arizona and operating under a certificate of authority from the Arizona Corporation Commission, regularly examined by the Insurance Department, a subdivision of that Commission. It is engaged

in the business of furnishing benefits upon the deaths of its members. (Tr. Rec. p. 2.)

It alleges that its principal place of business is in the State of Arizona and it has never maintained an office or agency in the State of California, but has members in the State of California; that many of them were acquired by application through the mails from the members to the home office in Phoenix, Arizona, and that many others were acquired by contracts of assumption from California corporations; that all the applications for certificates of membership are accepted or rejected, certificates of membership issued, and premiums, dues and assessments payable at Phoenix, Arizona. (Tr. Rec. p. 3.)

The complaint in a limited manner sets up the activities of appellant as regards the State of California. It alleges that the appellant has received inquiries from California residents in regard to "its insurance policies or benefit certificates" and has sent its representatives or agents, also members of the society, "to call upon persons making inquiries"; that applications have been signed by California residents and then forwarded to the home office in Phoenix, Arizona, for rejection or acceptance. In the latter case the policies are issued in Phoenix, Arizona, and mailed directly to the insured with notice to pay all premiums at the home office. (Tr. Rec. p. 4.)

Then follows a factual recitation concerning the defendant O'Lein, which resulted in a warrant of arrest being issued against "its representative" charging the selling of insurance in the State of California

without a license and aiding a non-admitted insurance company to transact insurance in California. The complaint then alleges that defendant Maynard Garrison, acting through his deputies, "in violation of the commerce clause of the Constitution of the United States and repugnant to the Fourteenth Amendment", "has interfered with said representatives and has threatened them with prosecution if they persisted in aiding in such transactions". Then follows names of persons "who have been ordered by the said defendant" not to assist "in such transactions for plaintiff". No dates or circumstances are given. (Tr. Rec. p. 5.)

The complaint alleges that, "the said transactions constitute interstate commerce and the assistance rendered by the agents is but one step in a chain of events constituting an interstate transaction". (Tr. Rec. p. 5.) It claims past interference with its representatives and threats of future interference, and alleges that appellant has and will suffer great and irreparable injury, that pecuniary compensation will not afford adequate relief, and that there is no speedy or adequate remedy at law if separate actions must be brought by its agents. (Tr. Rec. p. 5.)

The complaint then alleges that appellant is qualified to do a life insurance business in Arizona, but there is no provision for the admission of such company in California; that only foreign companies transacting life insurance business on the legal reserve basis or fraternal basis can be so qualified; that California has not regulated such business, but excludes foreign companies while regulating local companies

transacting that business, and that, therefore, appellees discriminate against appellant and interfere with its interstate commerce. (Tr. Rec. p. 6.)

The second cause of action incorporates all of the allegations of the first cause of action and in addition alleges that appellees advised members of appellant to sever their connections with appellant company and forfeit their certificates; that they were "illegal" and "not worth the paper they are written on", and that appellees continued a campaign of "molestation and interference" with appellant's members; that in 1936 an action was filed against the then Insurance Commissioner of California and several of his deputies seeking an injunction "against such acts" in the District Court of the United States for the Southern District of California, Central Division, and that after trial the Court found that defendants had made the statements, but not since September 10, 1936; that the Insurance Commissioner and his deputies in that action had not threatened to resume the writing of letters, and that this appellant had not been damaged to the extent of \$3000.00, and that, therefore, the Court dismissed that action for lack of jurisdiction. (Tr. Rec. p. 7.)

The complaint next alleges that the appellees, the Insurance Commissioner and his deputies, have continued to interfere with appellant's members and have written letters to named persons, "disturbing the same members and inferring to them that they could not collect on plaintiff's policies in case of loss"; that on September 16, 1941, a deputy wrote to a Mr. Plummer as follows:

“The First National Benefit Society has tried to get into California through both the Insurance Department and the Federal Courts and has been repulsed each time. Any insurance transaction by any person other than a certificate holder taking place within this State on behalf of that organization is unlawful.” (Tr. Rec. p. 8.)

Appellant then alleged that appellees have “written and verbally counseled”, upon many occasions, “said members to drop their certificates in the society” and continued to interfere with appellant’s members in California, with the intention and purpose of injuring and destroying the business of appellant, and that the acts have damaged appellant in excess of three thousand dollars. No circumstances of the purported acts are set forth in the complaint. It is alleged that the statements are untrue and that appellant’s certificates are legal and valuable, and that irreparable injury will result by weakening and impairing the existence of appellant. The next allegation is that appellees have advised members to drop their insurance and insure with a California corporation, and cites one letter purported to be written in 1937, reading in part:

“If you are interested in securing insurance which will guarantee the payment of your funeral expenses, etc., we would suggest that there are any number of insurance companies which are qualified to operate in this State.”

The complaint next alleges the number and amount of death claims paid by the company during the past

ten years, and the number of outstanding certificates; that many Arizona people who removed to California were advised by appellees to drop their certificates because they were unlawful and illegal in California, but no instances of the latter are set forth. It is alleged that appellant has lost ten thousand of its California members, involving an annual dues loss of two hundred forty thousand dollars and, based upon the average expectancy of time which such certificates remain in force, it has already been damaged in the sum of one million two hundred thousand dollars. The prayer is for an injunction and for damages in the sum of one million two hundred thousand dollars.

We believe the above to be a full and accurate synopsis of the allegations of the complaint. The defendant Alvin J. O'Lein, sued individually, has been voluntarily dismissed from the case.

The appellees filed in the lower Court, not as individuals for they are not sued as individuals but in their legal capacities, a motion to dismiss or a motion for more definite statement (Tr. Rec. pp. 13-18), together with points and authorities. Appellant filed points and authorities in opposition to the motion, the matter was argued in briefs, and a judgment of dismissal ordered by the Court and filed therein. (Tr. Rec. p. 19.) The District Court thereupon rendered and filed an exhaustive opinion (Tr. Rec. pp. 20-63), judgment was entered dismissing the action (Tr. Rec. p. 64), and an appeal taken to this Court.

STATUTES INVOLVED.

Appellant describes itself in the complaint as a nonprofit corporation and mutual benefit society in the business of furnishing benefits upon deaths of its members. (Tr. Rec. p. 2.) In its points and authorities in opposition to defendants' motion to dismiss; or motion for more definite statement filed in the Court below, appellant states that, "Chapter 9 of the California Insurance Code, being sections 10810 to 10940, provide for California companies on a stipulated premium plan and are similar to the plan of plaintiff".

California Insurance Code, section 10810 reads as follows:

"Every contract whereby a benefit is to accrue to a person named therein through the death of the insured, or his physical disability from accident or sickness, or for the payment of any sum of money as an annuity or endowment, if the benefit is conditioned, not upon fixed payments but upon the collection from time to time of stipulated premiums with provision requiring additional payments from insured members by assessment, shall be a contract of mutual insurance on the stipulated premium plan; and the business involving the issuance of such contracts shall be carried on in this State only by duly organized corporations subject to this chapter."

California Insurance Code, section 10818 reads:

"On and after January 1, 1940, no new insurer may be organized or admitted to operate under this chapter. Nothing herein contained shall pro-

hibit an insurer theretofore existing under or by virtue of this chapter from transforming to an insurer operating under the provisions of Chapter 9a of this part nor shall anything herein contained prohibit an association now operating under Chapter 8 of this part from transforming to an insurer operating under this chapter at times and in the manner provided in Chapter 8. Any corporation formed pursuant to Section 10815, which, prior to January 1, 1940, exhibits proof satisfactory to the commissioner that it has procured 100 subscribers or applicants who have each paid the required initial premium, and which also deposits with the commissioner on or before January 1, 1940, the sum of one thousand dollars (\$1,000) as a payment on its statutory deposit, may be admitted on completion of its organization and statutory deposit on or before July 1, 1940."

The plan of operation of appellant, which is issuing death benefit certificates under a stipulated premium plan with a right of assessment against certificate holders, was permitted in California, both as to foreign and domestic insurers, prior to 1940. (California Statutes 1935, Chapter 282.) Under the provisions of California Statutes 1939, Chapter 327, such companies licensed to do business in California prior to 1940 were and are permitted to continue in business in this State, but section 10818 of the Insurance Code of California forbids any new insurers to be organized or admitted under that chapter on or after January 1, 1940, whether a foreign or domestic company, with certain exceptions not here material.

There is no bar on foreign companies or on appellant from transacting insurance in California if they meet California standards and secure a certificate of authority from the Insurance Commissioner. However, section 700 of the California Insurance Code provides:

“A person shall not transact any class of insurance business in this State without first being admitted for such class. Such admission is secured by procuring a certificate of authority from the commissioner. Such certificate shall not be granted until the applicant conforms to the requirements of this code and of the laws of this State prerequisite to its issue. After such issue the holder shall continue to comply with the requirements as to its business set forth in this code and in the laws of this State.”

Section 703 of the California Insurance Code reads:

“Except when performed by a surplus line broker, the following acts are misdemeanors when done in this State:

“(a) Acting as agents for a nonadmitted insurer in the transaction of insurance business in this State.

“(b) In any manner advertising a nonadmitted insurer in this State.

“(c) In any other manner aiding a nonadmitted insurer to transact insurance business in this State.

“In addition to any penalty provided for commission of misdemeanors, a person violating any provision of this section shall forfeit to this State

the sum of five hundred dollars (\$500), together with one hundred dollars (\$100) for each month or fraction thereof during which he continues such violation.”

If appellant desires to transact life insurance in California, provision is made therefor, applicable alike to foreign and domestic insurers, in California Insurance Code, section 10510, providing for the issuance of licenses to do business in California, as follows:

“An incorporated life insurer issuing policies on the reserve basis shall not transact life insurance in this State unless it has a paid-in capital of at least two hundred thousand dollars (\$200,000).”

In other words, California statutes provide that foreign or domestic companies cannot now do a life insurance business except on a legal reserve basis and there are no exceptions, whether foreign or domestic companies, except as to companies existing and doing business in California prior to the enactment of the present laws. The policy behind these statutes is that experience has shown that without such reserves and surpluses, a mutual company doing business on the stipulated premium plan, with right of assessment, is not adequately safeguarded to insure that money will be available to pay death benefits. However, California permits such companies, foreign or domestic, without discrimination, operating in California prior to January 1, 1940, to continue in business in order to protect contracts written prior to that date.

Therefore, the effectiveness of these statutes, both as they affect appellant company and its agents, is before this Court.

OUTLINE OF ARGUMENT.

Argument:

I. The holding of the Supreme Court in *United States v. South-Eastern Underwriters Association* does not void State regulatory laws.

II. California statutes regulating and controlling insurance companies and their agents operating in California are a proper exercise of the State's police power.

III. California's regulatory statutes do not discriminate between foreign and domestic insurance companies or their agents.

IV. The Commerce Clause of the United States Constitution does not bar a state from adopting regulatory measures in the exercise of its police power.

V. Congress has now approved State regulation of foreign insurance companies.

VI. Appellees are entitled to a dismissal of this action under the Eleventh Amendment to the Constitution.

ARGUMENT.

I.

THE HOLDING OF THE SUPREME COURT IN UNITED STATES
v. SOUTH-EASTERN UNDERWRITERS ASSOCIATION DOES
NOT VOID STATE REGULATORY LAWS.

The principal contention of appellant in this case is that because of the decision of the *United States v. South-Eastern Underwriters Assn.*, 64 S. Ct. 1162, 322 U. S. 533, 88 L. Ed. 1082, California regulatory statutes do not apply to appellant or its agents even though Congress has not legislated upon the subject, and that the police power of the State has now become of no effect. We submit that the recent decision of the Supreme Court warrants no such assumption.

The Supreme Court first reviewed the question of state control over the business of insurance in the early case of *Paul v. Virginia*, 8 Wall. 168, decided in 1868. It was there decided that a Virginia statute forbidding any foreign insurance company from doing business in Virginia without first obtaining a license and meeting State conditions was constitutional. The statute was questioned on the ground that it interfered with interstate commerce, which field was left to Congress. The Court upheld the statute, holding that the business of insurance did not constitute interstate commerce even though it crossed State lines. Subsequently that Court upheld this view in a number of cases.

Ducat v. Chicago, 10 Wall. 410;

Liverpool Insurance Co. v. Massachusetts, 10 Wall. 566;

Philadelphia Fire Association v. New York,
119 U. S. 110;

Hooper v. California, 155 U. S. 648;

Noble v. Mitchell, 164 U. S. 367;

New York Life Insurance Co. v. Cravens, 178
U. S. 389;

Bothwell v. Buckbee-Mears, 275 U. S. 274;

*New York Life Insurance Company v. Deer
Lodge County*, 231 U. S. 495.

On June 5, 1944, the Supreme Court in the *Underwriters* case reversed a finding of *Paul v. Virginia* by holding that insurance is commerce and when transacted across State lines constitutes interstate commerce, making applicable the Sherman Anti-Trust Act. It did not, however, as contended by appellant (App's. Op. Br. p. 18), otherwise reverse the case. In fact, in the recent case of *Lincoln National Insurance Co. v. Read*, 65 S. Ct., p. 1220, it is cited as authority in a case which did not involve the commerce question. In the 1944 decision the majority opinion was careful to limit the effect thereof solely to the applicability of the Sherman Anti-Trust Act to insurance business (pp. 538-539):

“The record, then, presents two questions and no others: (1) Was the Sherman Act intended to prohibit conduct of fire insurance companies which restrains or monopolizes the interstate fire insurance trade? (2) If so, do fire insurance transactions which stretch across state lines constitute ‘Commerce among the several States’ so as to make them subject to regulation by Congress under the Commerce Clause? Since it is

our conclusion that the Sherman Act was intended to apply to the fire insurance business we shall, for convenience of discussion, first consider the latter question.”

More particularly the Court was cognizant of the fact that attempts might be made to distort the finding of the Court into a holding that State regulation of foreign insurance companies doing business within its borders violated the Commerce Clause of the Constitution, and to forestall such an interpretation Mr. Justice Black, who wrote the majority opinion of the Court, said (pp. 1170-1171):

“Another reason advanced to support the result of the cases which follows *Paul v. Virginia* has been that, if any aspects of the business of insurance be treated as interstate commerce, ‘then all control over it is taken from the states and the legislative regulations which this court has heretofore sustained must be declared invalid’. Accepted without qualification, that broad statement is inconsistent with many decisions of this Court. It is settled that, for Constitutional purposes, certain activities of a business may be intrastate and therefore subject to state control, while other activities of the same business may be interstate and therefore subject to federal regulation. And there is a wide range of business and other activities which, though subject to federal regulation, are so intimately related to local welfare that, in the absence of Congressional action, they may be regulated or taxed by the States. In marking out these activities the primary test applied by the Court is not the mechanical one of

whether the particular activity affected by the state regulation is part of interstate commerce, but rather whether, in each case, the competing demands of the state and national interests involved can be accommodated. And the fact that particular phases of an interstate business or activity have long been regulated or taxed by states has been recognized as a strong reason why, in the continued absence of conflicting Congressional action, the state regulatory and tax laws should be declared valid."

Thus Mr. Justice Black was aware of local regulatory laws and was careful to distinguish their integrity.

The opinion of the Court further states (p. 1169):

"To uphold insurance laws of other states, including tax laws, *Paul v. Virginia*'s generalization and reasoning have been consistently adhered to."

He is stating that he sees no reason why such state statutes should not continue to be upheld.

He further describes the nature of the problem before the Court in the *South-Eastern Underwriters Assn.* case as contrasted with problems at issue where validity of state statutes are questioned at page 1169:

"Today, however, we are asked to apply this reasoning, not to uphold another state law, but to strike down an Act of Congress which was intended to regulate certain aspects of the methods by which interstate insurance companies do business; and, in so doing, to narrow the scope of the federal power to regulate the activities of a great

business carried on back and forth across state lines. But past decisions of this Court emphasize that legal formulae devised to uphold state power cannot uncritically be accepted as trustworthy guides to determine Congressional power under the Commerce Clause. Furthermore, the reasons given in support of the generalization that 'the business of insurance is not commerce' and can never be conducted so as to constitute 'Commerce among the States' are inconsistent with many decisions of this Court which have upheld federal statutes regulating interstate commerce under the Commerce Clause."

He is saying that when the result of judicial action will be to narrow the scope of the federal power to regulate business carried on across state lines and the precise issue before the Court is not the validity of a state statute which already regulates that business, he will hesitate to void an act of Congress which appears applicable.

He further indicates a willingness to uphold state regulatory legislation as applied to the insurance business when he states (p. 1178):

"The argument that the Sherman Act necessarily invalidates many state laws regulating insurance we regard as exaggerated."

These expressed views clearly demonstrate that the majority justices were fully aware that their discussion in that case would encourage cases just like this case now before the Court. As such, the Court, through Mr. Justice Black, went out of its way to indicate that the *South-Eastern Underwriters Assn.*

case was not to be used as authority to declare state regulatory statutes unconstitutional as an unlawful interference with interstate commerce.

Likewise the Supreme Court in *Polish National Alliance of the United States of North America v. National Labor Relations Board*, 64 S. Ct. 196, 88 Law. Ed. 1117, decided also on June 5, 1944, by the Supreme Court, in holding a fraternal benefit society providing death, disability and accident benefits to its members and their beneficiaries, when doing business over state lines, was subject to the National Labor Relations Act, did not hold insurance companies relieved from state regulatory acts. In fact we again find the Supreme Court, this time speaking through Mr. Justice Frankfurter, advising that even though insurance be deemed interstate commerce when conducted over state lines, yet state regulatory and even tax statutes continue to be valid when not superseded by federal legislation. On page 1199 of the decision it is stated:

“In this aspect, the case we have before us presents a wholly new problem of the relation of federal authority to the business of insurance. The long series of insurance cases that have come to this Court for more than seventy-five years, from *Paul v. Virginia*, 8 Wall. 168, 19 L. Ed. 357, to *New York Life Ins. Co. v. Deer Lodge County*, 231 U. S. 495, 34 S. Ct. 167, 58 L. Ed. 332, have invariably involved some exercise of state power resisted, in most instances, on the claim that it was impliedly forbidden by the Commerce Clause. Such was the context in which this Court decided again and again that the making of a contract of insurance is not interstate com-

merce and that, since the business of insurance is in effect merely a congeries of contracts, the States may, for taxing and diverse other purposes, regulate the making of such contracts and the insurance business free from the limitations imposed upon state action by the Commerce Clause. Constitutional questions that look alike often are altogether different and call for different answers because they bring into play different provisions of the Constitution or different exertions of power under it."

Comment of eminent authority is pertinent and shows ample authority for the view that the *South-Eastern Underwriters* case does not invalidate state regulatory laws enacted under the police power when not discriminatory in nature.

In 1944 *Columbia Law Review*, pp. 775-777, it is stated with regard to the Supreme Court decision:

"All the Justices showed great concern over the practical effects of the instant decision. The dissenting opinions, especially, put overwhelming stress upon the danger that the outlawing of a considerable segment of state legislation will bring confusion into the field of insurance. The majority regarded these apprehensions as greatly exaggerated, and this view seems well supported by the prevailing law. The early notion that interstate commerce is, by virtue of the commerce clause itself, exempt from state regulation was long ago abandoned. Nor is it any longer true that Congress, by the regulation of merely one aspect of an interstate business, is presumed to have occupied the entire field or to have mani-

fested its intention that federal legislation be 'the full measure of regulation and (that) outside of it activity is to be free'."

Regardless of whatever doubt the decision may have created with respect to continued regulation by the states of insurance companies engaged in interstate commerce, that doubt has been dispelled by the enactment by the Seventy-Ninth Congress of Public Law 15 (Ch. 20; s. 340), effective March 9, 1945, entitled, "An act to express the intent of Congress with reference to the regulation of the business of insurance". This act, discussed later herein, clearly declares the policy of the Federal Government to leave regulation of insurance companies to the several states wherein they operate and that silence on the part of Congress is not to be deemed a bar to State regulation.

II.

CALIFORNIA STATUTES REGULATING AND CONTROLLING INSURANCE COMPANIES AND THEIR AGENTS OPERATING IN CALIFORNIA ARE A PROPER EXERCISE OF THE STATE'S POLICE POWER.

State laws regulating insurance companies, both foreign and domestic, have uniformly been upheld as a proper exercise of the police power of the State. Thus, in speaking of a State statute regulating insurance rates, the Supreme Court stated in *German Alliance Ins. Co. v. Lewis*, 233 U. S. 389, at p. 412, as follows:

“Those regulations exhibit it to be the conception of the law making bodies of the country without exception that the business of insurance so far affects the public welfare as to invoke and require governmental regulation. A conception so general cannot be without cause. * * * The effect of insurance—indeed, it has been said to be its fundamental object—is to distribute the loss over as wide an area as possible. In other words, the loss is spread over the country; the disaster to the individual is shared by many, the disaster to a community shared by other communities; * * *

“Their (i.e. insurance companies) efficiency, therefore, and solvency are of great concern. * * * We can see, therefore, how it has come to be considered a matter of public concern to regulate it, and governmental insurance has its advocates and even examples. Contracts of insurance, therefore, have greater public consequence than contracts between individuals to do or not to do a particular thing whose effects stop with the individuals.

(p. 415) “And both by the expression of the principal and the citation of the examples we have tried to confine our decision to the regulation of the business of insurance, it having become ‘clothed with a public interest’ and therefore subject ‘to be controlled by the public for the common good.’ ”

In *National Union F. Ins. Co. v. Wanberg*, 260 U. S. 71, the Court concisely stated at page 73:

“The decision of this court in *German Alliance Ins. Co. v. Lewis*, 233 U. S. 389, settled the

right of a state legislature to regulate the conduct by corporations, domestic and foreign, of insurance as a business affected with a public interest.”

In *Osborn v. Ozlin*, 310 U. S. 53, the Court construed a statute of the State of Virginia which in effect forbade certain contracts of insurance by companies authorized to do business in the State “except through regularly constituted and registered resident agents or agencies of such companies.” The Virginia “counter-signature” statute further provided that such resident agents “shall be entitled to and shall receive the usual and customary commissions allowed on such contracts,” and may not share more than one-half of this commission with a non-resident broker.

The statute was attacked as violative of the Fourteenth Amendment by foreign corporations authorized to do business in the State and by some of their salaried employees. In holding the statute to be a valid exercise of the State’s police power, the Court said, at pages 65-66:

“* * * Government has always had a special relation to insurance. The ways of safeguarding against the untoward manifestations of nature and other vicissitudes of life have long been withdrawn from the benefits and caprices of free competition. The state may fix insurance rates, *German Alliance Ins. Co. v. Lewis*, 233 US 389; it may regulate the compensation of agents, *O’Gorman & Young v. Hartford F. Ins. Co.*, 282 US 251; it may curtail drastically the area of free contract, *National Union F. Ins. Co. v. Wan-*

berg, 260 US 71. States have controlled the expenses of insurance companies, *New York Insurance Law*, Consolidated Laws of New York, chap. 28, §244, and Wisconsin Statutes, §201.21; and see Report of Joint (Armstrong) Insurance Investigation Committee (NY) pp. 403-418 (1906). They have also promoted insurance through savings banks; see Berman, The Massachusetts System of Savings Bank Life Insurance, Bulletin No. 615, U. S. Bureau of Labor Statistics, and New York Laws of 1938, chap. 471. In the light of all these exertions of state power it does not seem possible to doubt that the state could, if it chose, go into the insurance business, just as it can operate warehouses, flour mills, and other business ventures, *Green v. Frazier*, 253 US 233, or might take 'the whole business of banking under its control,' *Noble State Bank v. Haskell*, 219 US 104, 113. If the state, as to local risks, could thus preempt the field of insurance for itself, it may stay its intervention short of such a drastic step by insisting that its own residents shall have a share in devising and safeguarding protection against its local hazards. *LaTourette v. McMaster* 248 US 465. All these are questions of policy not for us to judge. * * * The limit of our inquiry is reached when we conclude that Virginia has exerted its powers as to matters within the bounds of her control."

And again at pages 62-3:

"In affecting the cost of these master policies, say the appellants, Virginia is intruding upon business transactions beyond its borders. Not

only is a licensed company forbidden to write insurance except through a resident agent, but the agent cannot retain less than one-half of the customary commission allowed on such a contract for what may, so far as the requirements of the law are concerned, be no more than the perfunctory service of countersigning the policy.

“But the question is not whether what Virginia has done will restrict appellants’ freedom of action outside Virginia by subjecting the exercise of such freedom to financial burdens. The mere fact that state action may have repercussions beyond state lines is of no judicial significance so long as the action is not within that domain which the Constitution forbids. *Alaska Packers Asso. v. Industrial Acci. Commission*, 294 US 532; *Great Atlantic & P. Tea Co. v. Grosjean*, 301 US 412, Compare *Equitable Life Assur. Soc. v. Pennsylvania*, 238 US 143.”

In *LaTourette v. McMaster*, 248 U. S. 465, the Court upheld the validity of a state statute which provided for the licensing of insurance brokers, and providing further that licenses could only be issued to residents of the State. At pages 467-468 the Court said:

“1. This contention depends upon the character of the business of insurance, and it was decided in *German Alliance Insurance Co. v. Lewis*, 233 U.S. 389, to be clothed with a public interest and subject, therefore, to the regulating power of the state. And it necessarily follows that, as insurance is affected with a public interest, those engaged in it or who bring about its consumma-

tion are affected with the same interest and subject to regulation as it is. A broker is so engaged—is an instrument of such consummation. The statute makes him the representative of the insured. He is also the representative of the insurer (*Hooper v. California*, 155 U. S. 648, 657), and his fidelity to both may be the concern of the state to secure. As said by the Supreme Court of the State:

“ ‘It is important for the protection of the interests of the people of the State that the business should be in the hands of competent and trustworthy persons,’ and we may say that this result can be more confidently and completely secured through resident brokers, they being immediately under the inspection of the commissioner of insurance. The motive of the statute, therefore, is benefit to insurer and insured and the means it provides seem to be appropriate.

“ ‘But we need not cast about for reasons for the legislative judgment. We are not required to be sure of the precise reasons for its exercise or be convinced of the wisdom of its exercise.’ It is enough if the legislation be passed in the exercise of a power of government and has relation to that power.”

It is significant that the above cases, to which may be added many others, and in particular the recent case (March, 1943) of *Hoopeston Canning Co. v. Cullen*, 318 U. S. 313, written by Mr. Justice Black, the author of the majority opinion in the *South-Eastern Underwriters* case, were not based upon any finding that the business of insurance constituted inter-

state commerce, but rather upon the power in the states to protect their citizens from insolvency, dishonesty and other evils which may occur in the business of insurance if not adequately regulated.

The fact that the Supreme Court has now held that insurance may be considered interstate for the purpose of prosecution under the Sherman Anti-Trust Act does not reverse this list of cases.

The Court did not say that states no longer have power to regulate insurance companies and their agents within the State by means of licenses, particularly where as here there exists no legislation by Congress, and where as here Congress in effect, by the adoption of Public Law 15, has approved state legislation. The chaotic condition which would result from any other interpretation is unthinkable.

This Court had before it the effect of the *South-Eastern Underwriters* case in *Ware v. Travelers Ins. Co.*, No. 10,881, decided June 29, 1945, in holding Idaho's resident agent law constitutional. This Court recognized that state regulatory laws enacted in furtherance of local welfare remain in effect. The California statutes in question are no different in basic purpose.

III.

CALIFORNIA'S REGULATORY STATUTES DO NOT DISCRIMINATE BETWEEN FOREIGN AND DOMESTIC INSURANCE COMPANIES OR THEIR AGENTS.

Appellees have under the title of this brief headed "Statutes Involved" (supra) set forth what are believed to be the controlling statutes and have noted that no discrimination is made between foreign and domestic insurers or their agents. In fact these key sections make no particular reference to a distinction between domestic and foreign insurance companies or their agents. In fact these key sections make no particular reference to a distinction between domestic and foreign insurance companies or their agents, but merely set up regulations applicable to all. Therefore, from the very terms of the statutes, no discrimination can be found. The Legislature controls and regulates domestic insurers for the protection of the people of the State and foreign companies are made subject to the same regulations.

In *Hoopeston Canning Co. v. Cullen*, 318 U. S. 313, the Supreme Court said through Mr. Justice Black, on March 1, 1943 (p. 320):

"These regulations can not be attacked merely because they affect business activities which are carried on outside the state. Of necessity, any regulations affecting the solvency of those doing an insurance business in a state must have some effect on business practices of the same company outside of the state. Nothing in the Constitution requires a state to nullify its own protective standards because an enterprise regulated has its

headquarters elsewhere. The power New York may exercise to regulate domestic insurance associations may be applied to foreign associations which New York permits to conduct the same kind of business. The appellants can not, 'by spreading their business and activities over other states * * * set at naught the public policy' of New York, *Atlantic & Pacific Tea Co. v. Grospan*, 301 U. S. 412, 427. Whereas here the state has full power to prescribe the forms of contract, the terms of protection of the insured, and the type of reserve funds needed, 'the mere fact that state action may have repercussions beyond state lines is of no judicial significance.' *Osborn v. Ozlin*, supra, at 62. Neither New York nor Illinois loses the power to protect the interests of its citizens because these associations carry on activities in both places. *Alaska Packers Association v. Industrial Accident Commission*, supra. We think the regulations themselves, since they are aimed at the protection of the solvency of the reciprocals or at promoting the convenience with which New York residents may do their insurance business, are all within the scope of state power. *Osborn v. Ozlin*, supra, at 65, 66."

Appellant seeks in effect to cause an interpretation which will result in it as a foreign company having an advantage over domestic companies. Certainly if California regulatory statutes are binding on domestic companies, but foreign companies and their agents may operate in this State with impunity, then there is discrimination, but in favor of appellant.

Appellant argues (App's. Op. Br., p. 31) that the question is whether California may "reach out across

its State lines and regulate the corporate structure, the actuarial standard, and even the bookkeeping basis, as well as complete regulation of such foreign company's business in every state in the Union for the privilege of transacting an insurance business with the citizens of California. * * *

Such an argument hardly needs an answer. California does not seek any control over appellant, but if appellant desires to do business in California, then it must meet California standards adopted for the protection of its citizens. Whether appellant desires to comply is strictly up to it to decide.

That California neither discriminates against foreign companies nor seeks to control them appears obvious. A similar contention was made in the very recent case of *State Farm Mutual Auto. Ins. Co. v. Duel*, 65 S. Ct. 573, 324 U. S. 154, decided February 12, 1945. In that case a Wisconsin statute requiring certain reserves of insurance companies was upheld against a claim that it violated the due process clause of the United States Constitution. In disposing of the contention the Court said (p. 576):

“Wisconsin has a legitimate concern with the financial soundness of companies writing insurance contracts with its citizens. * * * We cannot say that the reserve required by Wisconsin has any purpose but the protection of its own citizens. Its adequacy or appropriateness as a standard for qualification to do business in Wisconsin is, therefore, a question for Wisconsin to determine.”

There appears no reason why this logic, applied under the due process clause, should not have equal force under the commerce clause for if this subject is a matter of local concern under one clause of the Constitution, it must be likewise so under the other.

IV.

THE COMMERCE CLAUSE OF THE UNITED STATES CONSTITUTION DOES NOT BAR A STATE FROM ADOPTING REGULATORY MEASURES IN THE EXERCISE OF ITS POLICE POWER.

The case at bar involves a consideration of a police power exercised by a state and the Commerce Clause of the Federal Constitution. In this field there are, of course, innumerable cases from which certain definite rulings can be deducted. Many of these conclusions are set forth in the opinion of the Court below in the form of nine postulates. (Tr. Rec. pp. 41-46).

Professor Willis in his standard work, "Constitutional Law of the United States", divides the decisions of the Supreme Court of the United States on the question of who may regulate interstate commerce as between the Federal Government and the State into three periods. In the first period, being before the year 1851, the Supreme Court took the position that the power to regulate interstate commerce was a concurrent power of the Federal Government and the States. The exception, Professor Willis points out, was in *Gibbons v. Ogden* (1824), 9 Wheat. 1, when "Chief Justice Marshall almost took the posi-

tion that the power of the Federal Government was an exclusive power.” (See p. 307, Willis—Constitutional Law of the United States.) The second period was between 1851 and 1894 when the view of the Supreme Court was, “that where the matter was national in scope and needed one uniform method of regulation, the federal government’s power was an exclusive power, but that in other cases the power to regulate interstate commerce continued to be a concurrent power.” The third period came after 1894. The Supreme Court since that date, says Professor Willis, has continued to hold that where the matter was not national in scope, the power to regulate interstate commerce was concurrent, but also that where the federal government’s power was exclusive, the states have a general indirect or incidental police power. This resulted in the present doctrine that where the states have a concurrent power or even a general police power, after the Federal Government have exercised its specific police power, the Federal power will supersede any power which the states might otherwise have, and conversely in absence of the exercise of Federal power, the state’s police power will be upheld. The latter situation is present in this case.

When applying these general principles, it appears that the Courts have attempted in individual cases to reconcile the police power of the states and the Commerce Clause of the Federal Constitution for the public good, or, as stated in *Parker v. Brown*, 317 U. S.

341, at p. 362, "an accommodation of the competing demands of the state and national interests involved."

The broad question as to whether the constitutional power delegated by the states to Congress to regulate interstate commerce precludes the sovereign states from enacting under their police power legislation which in some way affects interstate commerce was presented to the Supreme Court of the United States in the case of *Cooley v. The Board of Wardens of the Port of Philadelphia, etc.*, 12 Howard 298, 53 U. S. 298 (1851), which involved a statute of the State of Pennsylvania requiring every ship arriving at or leaving the Port of Philadelphia to take aboard a local pilot. This State regulation was attacked as unconstitutional on the ground that it was an attempted regulation of a phase of interstate or foreign commerce and that the power to regulate such commerce was vested exclusively in the Congress of the United States.

As a preliminary step in determining the constitutionality of the statute, the Court found, first that the provisions concerning pilots "do constitute regulations of navigation, and consequently of commerce, within the just meaning of this clause of the Constitution," (p. 316) and "that a regulation of pilots is a regulation of commerce, within the grant to Congress of the Commercial power, contained in the third clause of the eighth section of the first article of the Constitution." (p. 317.)

The Court, notwithstanding, upheld the constitutionality of the state statute. It determined that the delegation of the power to Congress to deal with interstate commerce did not exclude the states from exercising any authority over the same subject. The Court made a sharp distinction between those phases of interstate commerce which require a single national uniform system or rule and those which are necessarily local in nature and can best or most advantageously be provided for by different systems enacted by the separate states. The Court said at pages 317-318:

“* * * Entertaining these views we are brought directly and unavoidably to the consideration of the question, whether the grant of the commercial power to Congress, did *per se* deprive the states of all power to regulate pilots. * * * The grant of commercial power to Congress does not contain any terms which expressly exclude the states from exercising an authority over its subject-matter. If they are excluded it must be because the nature of the power, thus granted to Congress, requires that a similar authority should not exist in the states. If it were conceded on the one side, that the nature of this power, like that to legislate for the District of Columbia, is absolutely and totally repugnant to the existence of similar power in the states, probably no one would deny that the grant of the power to Congress, as effectually and perfectly excludes the states from all future legislation on the subject, as if express words has been used to exclude them. And on the other hand, if it were admitted that the existence of this power in Con-

gress, like the power of taxation, is compatible with the existence of a similar power in the states, then it would be in conformity with the contemporary exposition of the Constitution (Federalist, No. 32), and with the judicial construction, given from time to time by this court, after the most deliberate consideration, to hold that the mere grant of such a power to Congress, did not imply a prohibition on the states to exercise the same power; that it is not the mere existence of such a power, but its exercise by Congress, which may be incompatible with the exercise of the same power by the states, and that the states may legislate in the absence of congressional regulations. (Citing cases.)

“* * * Now the power to regulate commerce, embraces a vast field, containing not only many, but exceedingly various subjects, quite unlike in their nature; some imperatively demanding a single uniform rule, operating equally on the commerce of the United States in every port; and some, like the subject now in question, as imperatively demanding that diversity, which alone can meet the local necessities of navigation.

“* * * Whatever subjects of this power are in their nature national, or admit only of one uniform system, or plan of regulation, may justly be said to be of such a nature as to require exclusive legislation by Congress. That this cannot be affirmed of laws for the regulation of pilots and pilotage is plain. * * *”

Many cases were subsequently determined using the above rule and were collated by the Supreme

Court in *Simpson v. Shepard* (Minnesota Rate Cases), 230 U. S. 352. In the latter case the Court said:

“The grant in the Constitution of its own force, that is, without action by Congress established the essential immunity of interstate commercial intercourse from the direct control of the states with respect to those subjects embraced within the grant which are of such a nature as to demand that, if regulated at all, their regulation should be prescribed by a single authority. It has repeatedly been declared by this court that as to those subjects which require a general system or uniformity of regulation, the power of Congress is exclusive. In other matters, admitting of diversity of treatment according to the special requirements of local conditions, the states may act within their respective jurisdictions until Congress sees fit to act; and, when Congress does act, the exercise of its authority overrides all conflicting state legislation. (Citing cases.) (pp. 399-400.)

* * * * *

“But within these limitations there necessarily remains to the states until Congress acts, a wide range for the permissible exercise of power appropriate to their territorial jurisdiction although interstate commerce may be affected. It extends to those matters of a local nature as to which it is impossible to derive from the constitutional grant an intention that they should go uncontrolled pending Federal intervention. Thus, there are certain subjects having the most obvious and direct relation to interstate commerce, which

nevertheless, with the acquiescence of Congress, have been controlled by state legislation from the foundation of the government because of the necessity that they should not remain unregulated, and that their regulation should be adapted to varying local exigencies; hence, the absence of regulation by Congress in such matters has not imported that there should be no restriction, but rather that the states should continue to supply the needed rules until Congress should decide to supersede them. Further, it is competent for a state to govern its internal commerce, to provide local improvements, to create and regulate local facilities, to adopt protective measures of a reasonable character in the interest of the health, safety, morals, and welfare of its people, although interstate commerce may incidentally or indirectly be involved. Our system of government is a practical adjustment by which the national authority as conferred by the Constitution is maintained in its full scope without unnecessary loss of local efficiency. Where the subject is peculiarly one of local concern, and from its nature belongs to the class with which the state appropriately deals in making reasonable provision for local needs, it cannot be regarded as left to the unrestrained will of individuals because Congress has not acted, although it may have such a relation to interstate commerce as to be within the reach of the Federal power. In such case, Congress must be the judge of the necessity of Federal action. Its paramount authority always enables it to intervene at its discretion for the complete and effective government of that which has been committed to its care, and, for this purpose and to this extent, in response to a conviction of na-

tional need, to displace local laws by substituting laws of its own. The successful working of our constitutional system has thus been made possible. (pp. 402-403.)

* * * * *

“State inspection laws and statutes designed to safeguard the inhabitants of a state from fraud and imposition are valid when reasonable in their requirements, and not in conflict with Federal rules, although they may affect interstate commerce in their relation to articles prepared for export, or by including incidentally those brought into the state and held for sale in the original imported packages.” (Citing cases.) (p. 408.)

In recent years the Supreme Court has been even more liberal in giving effect to the State's police power affecting interstate commerce when Congress has not acted. In *Bradley v. Public Utilities Commission of Ohio*, 289 U. S. 92, the Court said at page 95:

“* * * Regulation to ensure safety is an exercise of the police power. It is primarily a state function, whether the *locus* be private property or the public highways. Congress has not dealt with the subject. Hence, even where the motor cars are used exclusively in interstate commerce, a State may freely exact registration of the vehicle and an operator's license, *Hendrick v. Maryland*, 235 U. S. 610, 622; *Clark v. Poor*, 274 U. S. 554, 557; *Sprout v. South Bend*, 277 U. S. 163, 169; may require the appointment of an agent upon whom process can be served in an action arising out of operation of the vehicle within the State, *Kane v. New Jersey*, 242 U. S.

160; *Hess v. Pawloski*, 274 U. S. 352, 356; and may require carriers to file contracts providing adequate insurance for the payment of judgments recovered for certain injuries resulting from their operations. *Continental Baking Co. v. Woodring*, 286 U. S. 352, 365-366. Compare *Packard v. Banton*, 264 U. S. 140; *Sprout v. South Bend*, 277 U. S. 163, 171-172; *Hodge Co. v. Cincinnati*, 284 U. S. 335, 337. The State may exclude from the public highways vehicles engaged exclusively in interstate commerce, if of a size deemed dangerous to the public safety, *Morris v. Duby*, 274 U. S. 135, 144; *Sproles v. Binford*, 286 U. S. 374, 389-390. Safety may require that no additional vehicle be admitted to the highway. The Commerce Clause is not violated by denial of the certificate to the appellant, if upon adequate evidence denial is deemed necessary to promote the public safety. Compare *Hammond v. Schappi Bus Line*, 275 U. S. 164, 170-171."

In *South Carolina Highway Department v. Barnwell Bros. Inc.*, 303 U. S. 177, the Court upheld the constitutionality of a state statute which prohibited the use on state highways of trucks in excess of determined widths and weights. The Court denied a contention that these restrictions imposed an unconstitutional burden upon interstate commerce, stating at page 188:

"In each of these cases regulation involves a burden on interstate commerce. But so long as the state action does not discriminate, the burden is one which the Constitution permits because it is an inseparable incident of the exercise of a

legislative authority, which, under the Constitution, has been left to the states.

“Congress, in the exercise of its plenary power to regulate interstate commerce, may determine whether the burdens imposed on it by state regulation, otherwise permissible, are too great, and may, by legislation designed to secure uniformity or in other respects to protect the national interest in the commerce, curtail to some extent the state’s regulatory power. But that is a legislative, not a judicial, function, to be performed in the light of the congressional judgment of what is appropriate regulation of interstate commerce, and the extent to which, in that field, state power and local interests should be required to yield to the national authority and interest. In the absence of such legislation the judicial function, under the commerce clause, Const. art. 1, § 8, cl. 3, as well as the Fourteenth Amendment, stops with the inquiry whether the state Legislature in adopting regulations such as the present has acted within its province, and whether the means of regulation chosen are reasonably adapted to the end sought.” (Citing cases.)

Other cases holding similarly are *Milk Control Board v. Eisenberg Farm Products*, 306 U. S. 346, upholding a state statute defining a milk dealer as any person who purchases or handles milk within the state for sale, shipment, storage, purchase or manufacture within or without the State and creating a Milk Control Board with power to supervise and regulate the industry. The statute required a dealer to obtain a license and file a bond. The Board was

authorized to fix minimum prices. The milk dealer in question claimed that it could do business within the State without complying with the statute because it was engaged in interstate commerce and that the legislation as to such dealer was an unconstitutional burden on interstate commerce. The Court upheld the validity of the statute as a proper exercise of the police power of the State.

In the recent case of *Parker v. Brown*, 317 U. S. 341 the Court upheld the constitutionality of the California State marketing program affecting the raisin industry, 95% of which crop goes into interstate commerce. The Court upheld the statute, saying at pages 362-363:

“* * * When Congress has not exerted its power under the Commerce Clause, and state regulation of matters of local concern is so related to interstate commerce that it also operates as a regulation of that commerce, the reconciliation of the power thus granted with that reserved to the state is to be attained by the accommodation of the competing demands of the state and national interests involved. (Citing cases.)

“Such regulations by the state are to be sustained, not because they are ‘indirect’ rather than ‘direct’, see *DiSanto v. Pennsylvania*, *supra*; cf. *Wickard v. Filburn*, *supra*, not because they control interstate activities in such a manner as only to affect the commerce rather than to command its operations. But they are to be upheld because upon a consideration of all the relevant facts and circumstances it appears that the matter is one which may appropriately be regulated in the in-

terest of the safety, health and well-being of local communities, and which, because of its local character and the practical difficulties involved, may never be adequately dealt with by Congress. Because of its local character also there may be wide scope for local regulation without substantially impairing the national interest in the regulation of commerce by a single authority and without materially obstructing the free flow of commerce, which were the principal objects sought to be secured by the Commerce Clause.”

In *Union Brokerage Company v. Jensen*, 322 U. S. 202, the Court upheld the validity of a state statute denying recourse to the State Courts to any foreign corporation which did business in the State without first paying a license fee. The appellant was a foreign corporation engaged in foreign or interstate commerce. The Court said, at pages 210-211:

“We have considered literally scores of cases in which the States have exerted authority over foreign corporations and in doing so have dealt with aspects of interstate and foreign commerce. Whatever may be the generalities to which these cases gave utterance and about which there has been, on the whole, relatively little disagreement, the fate of state legislation in these cases has not been determined by these generalities but by the weight of the circumstances and the practical and experienced judgment in applying these generalities to the particular instances.”

Many additional cases could be cited in point, of which the following are but a few:

Hartford Accident & Indemnity Co. v. Illinois, 298 U. S. 155 (upholding a state statute requiring commission merchants selling in the State to be licensed when handling products from out of State);

Duckworth v. State of Arkansas, 314 U. S. 390;

Bradley v. Public Utilities Com. of Ohio, 289 U. S. 92;

Terminal R.R. Assn. v. Trainmen, 318 U. S. 1 (State law requiring railroads to provide cabooses);

Kelly v. Washington, 302 U. S. 1 (State law providing inspection of tugs admittedly engaged in interstate commerce).

Illustrative of the extent to which the Supreme Court has gone in upholding the States' police power even outside the field of interstate commerce are the cases upholding State laws prohibiting branch banking as applied to national banks. Thus we find that national banks created and existing by virtue of federal legislation may not operate branch banks in a state where there is a prohibitory state statute. National banks are creatures of federal law and yet, in the absence of conflicting federal statutes, local laws in this respect have been upheld. Cases in this field are: *First National Bank v. Missouri*, 263 U. S. 640, and *Lewis v. Fidelity and Deposit Company*, 292 U. S. 559.

The above principles are not overruled by the Court in the *South-Eastern* case, but repeated therein, for in that case the Court said (p. 1171):

“In marking out these activities the primary test applied by the Court is not the mechanical one of whether the particular activity affected by the state regulation is part of interstate commerce, but rather whether, in each case, the competing demands of the state and national interests involved can be accommodated. And the fact that particular phases of an interstate business or activity have long been regulated or taxed by states has been recognized as a strong reason why, in the continued absence of conflicting Congressional action, the state regulatory and tax laws should be declared valid.”

The provisions of California's regulatory statutes may have an incidental effect on interstate commerce, but only to a degree which is far overshadowed by the necessity of such regulations for the protection of residents of this State. Foreign companies and their agents are not prevented from doing business in California, but are merely required to abide by the same rules and regulations as applied to local companies and their agents. Such laws are constitutional and as stated in *Union Brokerage Company v. Jensen*, supra, decided on May 8, 1944, in commenting on the Commerce Clause at page 212:

“Nor does it preclude a state from giving needful protection to its citizens in the course of their contacts with businesses conducted by outsiders when the legislation by which this is accomplished is general in scope, is not aimed at interstate or foreign commerce, and involves merely burdens incident to effective administration. And so we conclude that in denying Union

the right to go to her courts because Union did not obtain a certificate to carry on its business as required by the Foreign Corporations Act, Iowa offended neither Federal legislation nor the Commerce Clause.”

V.

CONGRESS HAS NOW APPROVED STATE REGULATION OF FOREIGN INSURANCE COMPANIES.

On March 9, 1945, the Congress of the United States approved Public Law 15 of the Seventy-ninth Congress. This law was, therefore, passed after the decision in *United States v. South-Eastern Underwriters Assn.* and the institution of the case at bar. It is a clear expression by Congress of its recognition of the need for State regulation of foreign insurance companies doing business within their borders and of an intention that the States, rather than Congress, shall so regulate.

Public Law No. 15 reads:

“An Act

“To express the intent of the Congress with reference to the regulation of the business of insurance.

“Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Congress hereby declares that the continued regulation and taxation by the several States of the business of insurance is in the public interest, and that silence

on the part of the Congress shall not be construed to impose any barrier to the regulation or taxation of such business by the several States.

“Sec. 2. (a) The business of insurance, and every person engaged therein, shall be subject to the laws of the several States which relate to the regulation or taxation of such business.

“(b) No Act of Congress shall be construed to invalidate, impair, or supersede any law enacted by any State for the purpose of regulating the business of insurance, or which imposes a fee or tax upon such business, unless such Act specifically relates to the business of insurance; Provided, That after January 1, 1948, the Act of July 2, 1890, as amended, known as the Sherman Act, and the Act of October 15, 1914, as amended, known as the Clayton Act, and the Act of September 26, 1914, known as the Federal Trade Commission Act, as amended, shall be applicable to the business of insurance to the extent that such business is not regulated by State law.

“Sec. 3. (a) Until January 1, 1948, the Act of July 2, 1890, as amended, known as the Sherman Act, and the Act of October 15, 1914, as amended, known as the Clayton Act, and the Act of September 26, 1914, known as the Federal Trade Commission Act, as amended, and the Act of June 19, 1936, known as the Robinson-Patman Anti-discrimination Act, shall not apply to the business of insurance or to acts in the conduct thereof.

“(b) Nothing contained in this Act shall render the said Sherman Act inapplicable to any agreement to boycott, coerce, or intimidate, or act of boycott, coercion, or intimidation.

“Sec. 4. Nothing contained in this Act shall be construed to affect in any manner the application to the business of insurance of the Act of July 5, 1935, as amended, known as the National Labor Relations Act, or the Act of June 25, 1938, as amended, known as the Fair Labor Standard Act of 1938, or the Act of June 5, 1920, known as the Merchant Marine Act, 1920.

“Sec. 5. As used in this Act, the term ‘State’ includes the several States, Alaska, Hawaii, Puerto Rico, and the District of Columbia.

“Sec. 6. If any provision of this Act, or the application of such provision to any person or circumstances, shall be held invalid, the remainder of the Act, and the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected.”

There is ample precedent for congressional consent to State action in lieu of congressional control in the field of regulation, which has received judicial sanction. Thus the Wilson Act was passed in 1890 and upheld in *In re Rahrer*, 140 U. S. 545. In 1913 the Webb-Kenyon Act was enacted to give effect to State laws by divesting liquor of its interstate commerce character under certain circumstances, and this Act was upheld in *Clark Distilling Co. v. Western Maryland R.R. Co.*, 242 U. S. 311 (1917). The Hawes Cooper Act (1929) and the Ashurst-Summers Act (1935) were adopted to permit State control of convict-made goods passing in interstate commerce and were given effect in *Whitfield v. Ohio*, 297 U. S. 431 and *Kentucky Whip & Collar Co. v. Illinois Central*

R.R. Co., 299 U. S. 334. The Federal Power Act of 1935 falls in the same category. It was given effect in *Safe Harbor Water Power Corp. v. Federal Power Commission*, 124 Fed. (2d) 800.

Public Law 15, therefore, accomplishes two things. It affirmatively sets forth the Congressional intent that State regulatory statutes shall be given effect and that Congress does not intend to otherwise regulate insurance business and, secondly, under the cases just cited it permits the Courts to uphold state regulatory statutes.

It is true, of course, that Public Law 15 was enacted after the institution of this case. However, appellant seeks an injunction prohibiting the enforcement of California regulatory acts. It is a fundamental rule that the Court will not permit an idle act if, as is contended, Public Law 15 removes any question as to the effectiveness of California's laws. An injunction would constitute an idle act which the Court will not entertain.

VI.

APPELLEES ARE ENTITLED TO A DISMISSAL OF THIS ACTION UNDER THE ELEVENTH AMENDMENT TO THE CONSTITUTION.

The Eleventh Amendment to the Constitution reads:

“The judicial power of the United States shall not be construed to any suit in law or equity, commenced or prosecuted against one of the

United States by citizens of another State, or by Citizens or Subjects of any Foreign State.”

That appellant comes within the designation “citizen of another state” is clear, for it alleges that it is an Arizona corporation and corporations are included within the term “citizens”. (See *Manchester Fire Ins. Co. v. Herriott*, C. C. (Iowa), 91 Fed. 711.)

While the State of California is not named as a defendant in the case, it is the real party in interest, for the defendants are named and sued in their capacity as state officials or employees. Throughout the complaint the acts complained of on the part of the appellees are alleged to be done as the Insurance Commissioner or his deputies.

The complaint, especially in so far as it seeks a money judgment, seeks that judgment against the appellees by reason of their official acts—acts alleged to be done as state officials. Such an action seeks judgment against the State of California, but the State has not consented to be sued in this type of action, as is clear from an examination of California statutes. Therefore a money judgment cannot be rendered against these appellees.

Moreover, if the action should be deemed against the appellees in their individual or personal capacity, action for a money judgment will still not lie.

Section 1955, Government Code of the State of California, reads:

“If any officer, agent, or employee of the State, a district, county, political subdivision, or city

acts in good faith and without malice under apparent authority of any law of the State, whether an initiative measure or an act enacted by the Legislature and the law subsequently is judicially declared to be unconstitutional as in conflict with the Constitution of the State or of the United States, he is not civilly liable in any action in which he would not have been liable if the law had not been declared unconstitutional, nor is he liable to any greater extent than he would have been if the law had not been declared unconstitutional."

This is an action which is based upon the theory that the appellee officers or employees of the State of California have acted under a statute, to-wit, the Insurance Code of the State of California, which statute is claimed to be unconstitutional. It is presently the type of action described in Section 1955 of the California Government Code. Under that section the appellees are granted immunity from liability. It is submitted, therefore, that appellant's action in this case, in seeking a money judgment, does not lie, whether the suit be deemed one against the appellees as representatives of the State of California or one against the appellees in their personal capacity.

Moreover, suits to restrain execution of State statutes will lie only when the act that one seeks to restrain is without the authority of the State law or provisions of statutes or Constitution of the United States. (*Worcester County Trust Co. v. Riley*, 302 U. S. 292.)

However, the statutes being enforced by appellees are so clearly constitutional that this case is in fact one against the State of California without its consent, in violation of the Eleventh Amendment to the Constitution of the United States, and, therefore, cannot be maintained.

CONCLUSION.

The judgment of the Court below dismissing the complaint should be affirmed.

Dated, San Francisco, California,
August 20, 1945.

Respectfully submitted,

ROBERT W. KENNY,

Attorney General of the State of California,

T. A. WESTPHAL, JR.,

Deputy Attorney General of the State of California,

Attorneys for Appellees.

No. 11040.

IN THE

United States Circuit Court of Appeals

FOR THE NINTH CIRCUIT

FIRST NATIONAL BENEFIT SOCIETY,

Appellant,

vs.

MAYNARD GARRISON, Insurance Commissioner of the State
of California, and H. F. RISBROUGH and MAE BARR
LONG, Deputy Insurance Commissioners of the State of
California,

Appellees.

Upon Appeal from the District Court of the United States for the
Southern District of California, Central Division.

APPELLANT'S REPLY BRIEF.

ROBERT R. WEAVER,
404 First National Bank Building, Phoenix, Arizona,

EARL BLODGETT,
417 South Hill Street, Los Angeles 13, California,

Attorneys for Appellant

FILED
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PAUL P. O'BRIEN,
CLERK

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No. 11040.

IN THE

United States Circuit Court of Appeals

FOR THE NINTH CIRCUIT

FIRST NATIONAL BENEFIT SOCIETY,

Appellant,

vs.

MAYNARD GARRISON, Insurance Commissioner of the State of California, and H. F. RISBROUGH and MAE BARR LONG, Deputy Insurance Commissioners of the State of California,

Appellees.

APPELLANT'S REPLY BRIEF.

In this reply to Appellees' Brief, we shall attempt to follow the sections thereof chronologically as they appear in the brief.

Nature of the Case.

Appellees set forth what they consider the nature of this case. They state that it is an appeal from a decision, declaring in effect, that Appellant may not transact business in California without complying with the California regulatory enactments. We contend that this is not the issue in the case, and that the matter of appellant doing business in the state of California is not involved herein. The case was dismissed on the allegations as they appear on the

face of the complaint and the complaint states [Tr. Rec., p. 3]:

“That the plaintiff, the First National Benefit Society, has never maintained an office or agency in the State of California and has *never done business in the State of California.*”

This case involves only the Appellees' interference with interstate commerce, and its prohibition of acts which have never been held to constitute “doing business” within a state.

Appellees further continue on page 2 of their brief that if appellant had been successful in the court below or in this Court, it would mean that Appellant or any insurance corporation, by the expedient of operating from another state, may nullify California insurance laws in existence for many years. No such issue is involved and no such result would obtain; however if appellant were successful in the Court below or if it is successful in this Court, it would mean that the practices of the Insurance Department of the State of California and many of the other states, engaged in for many years whereby they have prohibited interstate transactions with its citizens by companies organized and operating in other states would, indeed be nullified. The fact that this practice has long been indulged in, cannot sustain it any more than the fact that the combinations denounced in *United States v. Southeastern Underwriters Assn.*, 64 S. Ct. 1162, 88 L. Ed. 1082, had been practiced for many years could not sustain such practices. Appellant has not contended and does not contend that the *SEUA* case, *supra*, has the effect of voiding all state regulatory legislation.

We admit that any corporation or individual which does business in a state must comply with the valid regulatory

legislation of that state, but we do contend that since we must now regard insurance as commerce and when transacted across state lines, interstate commerce, that the multitude of decisions by the United States Supreme Court protecting such commerce from the prohibitions of the state are now illegal.

Statement of the Case.

Appellee has stated (Appellees' Brief, p. 3) that the complaint alleges that plaintiff, the appellant herein, "has never maintained an office or agency in the State of California, but has members in the State of California, etc." Appellees have placed a comma after the word "California" and have continued with the statement concerning appellant's members, while the complaint [Tr. Rec., p. 3] from which these statements were taken does not place a comma after the word "California", but continues with the words

"* * * and has never done business in the State of California."

Appellees follow with what they consider the gist of the complaint, stating that these matters are set up in a limited manner. As a matter of fact, they are set up in detail and at length, but of course are limited for the reason that every act of the character complained of cannot be set out as space would not permit.

Since appellant has set forth in its statement of the case the gist of the complaint, the sufficiency of which is in question herein, and since we believe that the complaint itself is not any longer than appellees' recitation of its contents, further reference to appellants statement of the case would avail nothing.

Statutes Involved.

Appellant agrees with appellee that the statutes set out under the above heading in their brief, pages 8-12 thereof, are involved in this case, but disagree with the appellees' interpretation thereof and their conclusions therefrom.

Appellee has set out in the pages above referred to certain of the laws of California involved herein, and we believe, have correctly shown that "Chapter Nine" companies defined in Section 10810 of the California Insurance Code provides for insurers operating under substantially the same laws as those under which appellant is authorized to transact an insurance business by the State of Arizona. Appellees have further shown that under Section 10810 only such companies existing in California on January 1, 1940 can now do business in that state. They contend that since there can be no new California companies admitted in that state that there is no discrimination against appellant, while we contend that a law which protects a limited number of companies in the transaction of a certain type of business and excludes all other companies from entering that field in the state, is creating a monopoly on behalf of those already in the field and is therefore discriminatory. The point involved herein in relation to interstate commerce is still more serious.

Appellant has not applied for permission to do business in the State of California and indeed under the law such application would be an idle act, but it has merely endeavored to complete a number of interstate transactions with the citizens of the State of California and to deliver to those citizens of California an article of commerce, the sale of which is not prohibited in that state, but is allowed by certain companies now operating therein.

The only article of commerce which, under the decision of the United States Supreme Court and the intent of the Constitution, may be prohibited in interstate commerce is intoxicating liquor, and that is by reason of the reservation in the Twenty-First Amendment whereby the Eighteenth Amendment was repealed with the special reservation that liquor could not be imported into a state contrary to the laws of that state. In other words, the right of any state to prohibit interstate transactions in liquor (the most regulated article of interstate commerce) is predicated upon the reservation in the Twenty-first Amendment to the Constitution, preserving to the states the right to prohibit commerce therein or to in any other way regulate the same. In *Blatz Brewery v. Collins*, 160 Pac. (2d) 45, *Fintch & Co. v. McKittrick*, 305 U. S. 395, and *State Board of Equalization v. Youngs Market*, 299 U. S. 59-63, the Courts have said that to place any other construction upon the Twenty-first Amendment would be to rewrite it. As we have insisted oft before in the conduct of this case that if appellees will cite one case by a Federal Appellate Court upholding the right of a state to prohibit in interstate commerce that which it allows to be sold by others within its borders outside the authority of this amendment, we will be willing to subsidize in this regard.

Even where the article is prohibited by a state, which was true in regard to alcoholic liquors prior to the Eighteenth Amendment, it still could not be prohibited in interstate commerce and such prohibition by the state now is only valid because of the special provision in the Twenty-first Amendment providing for it.

Appellees' statement on page 11 of their brief that California does not now allow any life insurance business to be sold in California except upon a legal reserve basis by

any company other than those existing and doing business prior to January 1, 1940 followed with the statement that it does not discriminate against any company, amounts to saying two different things in the same breath.

Argument.

I.

The first topic under the argument set forth by appellees is that the holding of the United States Supreme Court in *United States v. Southeastern Underwriters Assn.*, 64 S. Ct. 1162, 88 L. Ed. 1082, does not void regulatory laws. Appellant has never contended and does not now contend that this case does void state regulatory laws. Appellees, in their statement that this is contention of appellant, have misunderstood its contention.

Appellant does contend however that there has been some change as to the right of the state of California or any state to interfere with or prohibit transactions in that subject known as insurance, which is now held to be interstate commerce, and must be subject to the decisions limiting the rights of the states in connection therewith.

Beginning on page 13 of Appellees' brief is a digest of the holding of *Paul v. Virginia*, 8 Wall 168, and a citation of the leading cases which followed that decision upholding state regulation of interstate insurance transactions on the sole ground that insurance is not commerce and hence could not be interstate commerce. We have carefully examined all the cases upholding the right of the state to interfere with or to regulate interstate insurance transactions, and it appears that every one of them is based upon the fact that insurance is not commerce and when transacted across state lines is not interstate

commerce. Appellees then follow by stating that a finding of *Paul v. Virginia*, 8 Wal. 168, was reversed. As a matter of fact, the *only* finding of *Paul v. Virginia*, *supra*, was reversed, to-wit: Insurance is commerce and when transacted across state lines is interstate commerce.

Appellees' argument could mean only one thing, and that is that they contend that insurance is not commerce when a state law is being interpreted and that it is commerce when a Federal law is being tested. We have contended throughout this discussion that the only distinction made by the Supreme Court in the *Southeastern Underwriters Assn.*, case, *supra*, is in the following language quoted by counsel on page 15 of their brief, to-wit:

"It is settled that, for Constitutional purposes, certain activities of a business may be intrastate and therefore subject to state control, while other activities of the same business may be interstate and therefore subject to federal regulation. And there is a wide range of business and other activities which, though subject to federal regulation, are too intimately related to local welfare that, in the absence of Congressional action, they may be regulated or taxed by the States."

We call this Court's attention to the fact that the Supreme Court in discussing the question as to whether or not state regulation would be abolished indicated that statement would be subject to *qualification* and then set out the qualifications in the above language.

After the Court's statement that some of the activities of the same business would be subject to Federal regulation there appears a footnote number 29, and the footnote cites as its first cases *Crutcher v. Kentucky*, 141 U. S. 47 and *Atlantic Refining Co. v. Virginia*, 302 U. S. 22, both

of which cases hold that a state may not require a party engaged in interstate commerce to obtain a license to transact such business.

On page 16, appellee quotes the opinion of Justice Black in the *SEUA* case, *supra*, as follows:

“To uphold insurance laws of other states, including tax laws, *Paul v. Virginia*’s generalization and reasoning have been consistently adhered to.”

Counsel then continues with the statement that in such language the Court is stating that he sees no reason why such statutes could not be upheld.

It appears to us that when a Court has reversed a decision of long standing, and in that reversal states that certain laws have been based entirely upon the generalization in that case, that he is stating that those laws are no longer effective. If Justice Black has called attention to the fact that state laws in regard to interstate insurance transactions have been upheld by following the generalization of the case which is being reversed, in that very opinion that he is calling attention to the fact that those laws have had their foundations removed and that they must now fall insofar as they attempt to interfere with or regulate interstate transactions therein.

On page 16 of appellees’ brief, counsel quotes the Court as follows:

“The argument that the Sherman Act necessarily invalidates many state laws regulating insurance we regard as exaggerated.”

If this statement means, as counsel attempts to interpret it, that state laws will not be affected at all, why has the Court not said so instead of using the word “exaggerated.”

The word "exaggerated" means overstatement. We agree that this would be an overstatement. The state laws are not invalidated but insofar as they prohibit, burden or discriminate against interstate transactions, they are invalid. This, we believe, is the reason the Court said the statement was "exaggerated" rather than coming out with the statement that these laws would not be affected. It would have been so simple for the Supreme Court to have said that the state laws regulating this type of interstate commerce would not be affected if this were its opinion.

At the bottom of page 17, counsel makes this statement:

"These expressed views clearly demonstrate that the majority justices were fully aware that their discussion in that case would encourage cases just like this case now before the Court."

We agree that the Supreme Court knew that a case exactly like this one would be before it, under its *SEUA* decision. That being the case, would it not have been reasonable to expect that if the Supreme Court felt that there would be no change by reason of this decision that it would have said so, because the argument was before it and the contention had been made. Instead, the Court said, "* * * that broad statement without qualification * * *" is contrary to many of our decisions and also said, as counsel has stated, that such statement was "exaggerated".

Could it be plainer that the Supreme Court contemplated that there would now be some qualification of the states regulatory rights and that it has pointed out that those regulations would be in effect except insofar as they attempt to interfere with, prohibit, or license interstate commerce.

On pages 18 and 19 of their brief, Appellees cite the *Polish National Alliance of North America v. National Labor Relations Board*, 64 S. Ct. 196, 88 L. Ed. 1117, decided simultaneously with the *Southeastern Underwriters* case, *supra*, and by quoting certain of the phraseology have merely continued their effort to establish that one certain phase or activity of a business is interstate commerce when a Federal Law is in question and intrastate commerce when a state law is in question.

Beginning on page 19 of their brief, appellees state that comment of eminent authority is pertinent and quotes 1944 Columbia Law Review, pp. 775-777 to the effect that the dissenting opinions were based upon the belief that state legislation would be outlawed and would bring confusion into the field of insurance. The statement follows that the majority regarded these apprehensions as greatly exaggerated. Will counsel for the appellees explain why this eminent authority, together with the Court itself has used the word "exaggerated" or "qualified" in connection with this subject instead of using the word "unfounded" or some other word which would thoroughly dispose of the matter? It appears to use that when eminent authorities skilled in the use of the English language state that certain contentions are exaggerated or that they must be qualified, do not mean that these contentions are entirely without foundation. Certainly, these authorities, by their plain words have told us that in some respects these state regulations would be curtailed. If this is true, it must be based upon some distinction and the only distinction possible is the difference between the regulation of companies doing business within a state as compared with a series of transactions across state lines, not amounting to "doing business" within the state.

We agree with counsel that eminent authority on Constitutional law is very often the safest guide to Constitutional construction.

Hugh Evander Willis, whose recognized work on Constitutional Law of the United States, is cited in our Opening Brief on page 18, believes that at least one effect of the decision must be now apparent, and that is that the Equality Clause of the United States Constitution must now be applied to all interstate transactions in insurance as a result of making insurance interstate commerce, and that the state cannot require that an insurer obtain its consent to enter into such transactions. We have no quarrel with appellees' contention that the insurance business is of such a nature that it permits of governmental regulation. (The Insurance Law Journal, Issue No. 258, p. 393, July 1944).

The effect of the *SEUA* decision is being constantly commented upon in the well-known insurance trade journals. In the National Underwriter under date of August 16, 1945, beginning on page 5 thereof is an article reviewing the activities and statements of Frank H. Elmore, former assistant to the United States Attorney General, who had much to do with the progress of the *South-eastern Underwriters* case. This article is a review of the publication in the Journal of American Insurance, the organ of the American Mutual Alliance. On page 6 of the National Underwriter of the above date is the following statement by Mr. Elmore:

"Thus at long last the legislative, executive and judicial branches of the federal government are in agreement that insurance is commerce and the unrealistic fiction established in *Paul v. Virginia* is but a historical memory. * * * The investigation,

the indictment and the decision itself all have been criticised and denounced. Some exprobaton may have been deserved. But I am confident that benefits will flow to all whose lives, property, or affairs are touched by the great national, or international, institution of insurance from the official recognition that this industry, served by and serving millions, is now entitled to take its true place. By the side of hundreds of other trades and industries, it will go forward in the American way, sharing with them the discipline and the protection of the commerce clause of the United States constitution."

II.

"California Statutes Regulating and Controlling Insurance Companies and Their Agents Operating in California Are a Proper Exercise of the State's Police Power."

We have no fault to find with this statement. *Of course* the State of California can regulate companies doing business within its borders.

There is one contention, however, made by appellees under this heading that should be cleared up.

There is no law in the State of California requiring an insurance agent or insurance solicitor to obtain a license to indulge in that business separated from an agency to represent a particular company or employer. No person could obtain a license in the State of California to perform any transaction for the appellant herein or for any nonadmitted company. Section 1640-1750 of the California Insurance Code. This law is not therefore just a means of insuring that such agents be of good moral character, but is also a means of seeing to it that no non-

admitted company transacts any business with a citizen of the State of California.

One of the Sections under which the said F. O. Robertson, mentioned in the complaint herein, was arrested and prosecuted, is Section 703 of the California Insurance Code. Subdivision "a" thereof makes it a misdemeanor to act as an agent for a nonadmitted insurer in the transaction of insurance business in that state. As a matter of fact, the acts as set forth in the complaint herein do not constitute transacting business in the State of California. The full significance of this section can be ascertained by reading Sections "b" and "c" thereof. Section "b" prohibits the advertising of a nonadmitted insurer so that even a card in the mail, a radio broadcast or an advertisement in a newspaper would be a violation of this section. Section "c" makes it a misdemeanor to in any other way aid a nonadmitted insurer to transact insurance business in that state, which would include the delivery of a check to a beneficiary or an examination by a physician. The language would also include the act of a citizen in insuring his life or his property with a nonadmitted company.

Sections 703(a) and Section 1642 of the California Insurance Code prohibits a member of a foreign insurer or any person in the State of California from assisting in any such interstate transaction except in the case of a surplus line broker, which broker, under Chapter Six, Sections 1760 to 1779 of the said insurance code, must obtain a license, must pay a discriminatory three per cent tax, must not write the business in a non-admitted insurer, unless there is no admitted insurer in which the risk can be written, or he must not write it for a less premium than it would be written by any company admitted to do business in the State of California.

Further, in spite of the fact that any citizen of California, under the Federal Constitution is entitled to insure his life with any company of his choosing, if he has done this under the authority of the only law in California which will permit it, to-wit the surplus line brokers' law, he would then be subject to the restrictions set out in Section 1779 of the California Insurance Code which reads as follows:

“1779. Every insured for whom insurance has been effected with nonadmitted insurers shall, upon request in writing by the commissioner, produce for the commissioner's examination all policies, contracts, and other documents evidencing such insurance, and shall disclose to the commissioner the amount of the gross premiums paid or agreed to be paid for such insurance. For refusal to obey such request, such insured shall forfeit to the State of California the sum of two hundred dollars for each refusal.”

It is apparent from these subdivisions that the purpose of this section is not the protection of the insuring public but a conservation of business for companies admitted in the State of California. Further, other sections of the California law, as well as a long line of decisions, have attempted to preserve to the individual the right to insure his life or his property with any insurer of his choosing. (Section 1760 of the California Insurance Code.)

Allger v. Louisiana, 165 U. S. 580, 41 L. Ed. 832, 17 S. Ct. 427;

St. Louis Compress v. Arkansas, 260 U. S. 34, 67 L. Ed. 297, 43 S. Ct. 145;

Couch Encyclopedia, of Insurance Law, Vol. I, p. 578, No. 245D.

If then, any individual has a right to insure his life with this appellant if he so chooses, how can it be said that after he has contacted the insurer for this purpose that any person who assist him in any of the details thereof has committed an offense or that such acts, legal when done by one person, are illegal when done by another.

III.

This section of appellees' brief is merely re-stating their contention that California statutes as applied to the acts complained of do not constitute a discrimination between foreign and domestic insurers for their agents. Counsels' constant repetition of this statement may have convinced them that it is true, but their discussion of their statutes involved, that no life insurance company except those writing on a legal reserve basis will now be permitted to even complete an interstate transaction with a citizen of California coupled with their admission that there are companies in California still operating in the same manner as appellant thoroughly refutes this bare statement.

A glance at the meaning of the words "legal reserve insurance" as compared to the tabular reserve maintained by such companies as appellant discloses that the difference between them is a matter of bookkeeping. The legal reserve company sets aside a reserve, however small it may be, against each policy, while appellant and similar companies set aside one reserve against its entire contingent liability. This reserve can be, and many times is, larger in proportion than that set up on the legal reserve basis, however upon the statement of the case by appellees, even if appellant's reserves were proportionately one hundred times larger than the reserves maintained by any legal reserve company in the world, appellant still could

not be admitted in that state, and according to appellees, the officers of the state would be entitled to arrest any man who delivered a newspaper to a citizen of California containing an advertisement by such a company. It should be noted also that a company operating under the Arizona law, by authority of which appellant was organized and exists, and the provisions of the California law for similar companies, would not permit appellant to conduct its book-keeping system on the legal reserve basis.

Under their oft repeated statement that California regulatory statutes do not discriminate between foreign and domestic insurance companies the appellees have cited *Hoopeston Canning Co. v. Cullen*, 318 U. S. 313, decided on March 1, 1943. This case was decided approximately a year before the handing down of the decision in *United States v. Southeastern Underwriters Assn.*, *supra*, and while the reasoning of *Paul v. Virginia* was still the law. In spite of that fact, this decision does not uphold the law of New York on the ground that it has the right to regulate interstate commerce, but the Court has gone to great length to inquire into and analyze the entire transactions of this company and sustained the right of New York to regulate it by arriving at the conclusion that the company was actually doing business within the State of New York. All of the transactions of this company were in the State of New York except that its head office was maintained in Illinois and its contracts were signed by proxy in Illinois.

The Court said in part:

“* * * we conclude that in determining whether insurance business is done within a state for the purpose of deciding whether a state has power to regulate the business, consideration of the location of

the activities prior and subsequent to the making of the contract (Osborn v. Ozlin, *supra*, of the degree of interest of the regulating state in the object insured, and the location of the property insured are separately and collectively of great weight * * *."

The Court continued in substance that since all of the transactions except the actual signing of the contracts by proxies in Illinois were transacted in New York, that the insurance company was actually doing business in the State of New York. This careful weighing of the facts to determine whether or not the company was doing business in New York could only be based upon the realization by the Court that if it were not actually doing business within the state, that its interstate transactions would not be subject to regulation by New York.

On page 28 of their brief, appellees have cited *State Farm Mutual Auto Ins. Co. v. Duel*, 65 S. Ct. 572, 324 U. S. 154, decided February 12, 1945, in which the Supreme Court held that a law of Wisconsin requiring a different reserve than that required by Illinois, the home state of the company involved, did not violate the Due Process Clause of the United States Constitution. Counsel have neglected to add that the matter of interstate commerce was raised in this case, after the decision in the state court, for the first time in the Supreme Court and that the Supreme Court devoted a considerable portion of its opinion to a statement that the State Farm Mutual Auto Insurance Company still had the right to raise the interstate commerce question for the first time in the Wisconsin Court and that for that reason the Supreme Court was not now deciding the interstate commerce question raised by the *Southeastern Underwriters* case, which it recognized as a supervening event, giving the appellant in

that case the right to raise the question again in the Wisconsin Court. Will counsel explain why, if the Supreme Court intended to say that there was to be no change in the application of the regulatory laws in the state, that it regards the *SEUA* case as a supervening event in this matter?

Counsel says there is no reason why the logic applied under the Due Process Clause should not have equal force under the Commerce Clause. The apparent reason is that that Supreme Court has said in the very case cited by counsel that the *SEUA* case has changed the situation.

We again quote a short statement by the Supreme Court in the above case relied upon by counsel:

“If a state undertook to regulate out of state activities through such a requirement different questions would be posed.”

IV.

Appellees' statement under the section number IV that the Commerce Clause of the United States Constitution does not bar a state from adopting regulatory measures in the exercise of its police power is also “exaggerated”, and, like the statement that the *Southeastern Underwriters*' decision would do away with all state regulation, this statement is also subject to “qualifications”.

We believe that counsel will agree that this broad statement is put in rather unfortunate language, for if counsel means that no law passed by the state under its police power could be considered barred by the Commerce Clause of the United States Constitution, then their statement is contrary to practically every case ever rendered on this subject. If counsel's statement is true, then they would be resurrecting that multitude of laws enacted by the

states in the exercise of their police power that have been declared unconstitutional because they constituted an undue burden on interstate commerce. We believe that counsel did not mean this statement could be true in the broad sense in which it is stated, in view of the fact that they have continued on page 31 of their brief with the statement that the Courts have attempted in individual cases to reconcile the police power of the states and the Commerce Clause of the Constitution wherever possible and have at length set out argument from this type of case. Evidently counsel have searched the reports diligently and thoroughly to find cases to support their contention that the state may even require its permission by way of license before a foreign company could enter into an interstate transaction with one of its citizens, but no such case evidently has been found, for they have neither cited nor quoted one. We too have searched diligently for such a case and after this search believe that there is no such decision in the books.

It may be true as counsel states on page 37 of appellees' brief that there has been a liberalization in the matter of allowing concurrent state regulation in the matter of interstate commerce, but none of the cases cited and none of the authorities on this subject have ever gone beyond the proposition that the state may regulate interstate commerce only when that regulation is purely local in its application. We have found no case nor any authority of any kind to support the proposition that a state government may enact a law stating that a certain type of commerce can continue to be transacted by certain individuals within its borders, prohibiting every other individual therefrom, and then applied that prohibition to individuals sending the same article into the state in an interstate

transaction. As we have above stated, the only instance of such a situation is the one specially provided for under the Twenty-first Amendment to the United States Constitution.

V.

Under section V of their brief, appellees have stated that Congress has now approved of state regulation of insurance companies.

The very fact of this enactment would indicate that the legislators believe that without it, state regulation would be interfered with under the new status of insurance in regard to commerce. If, under the Constitution, the Equality Clause must now be applied to this type of interstate commerce and if now, under the Constitution, it cannot be prohibited by the states and if it is more than local in its application or continues in violation of constitutional guarantees, then an act of Congress is of no avail. The meaning of the Constitution is solely the prerogative of the Courts. It cannot be amended by Congress and a construction placed upon it by Congress is not binding upon the Courts.

There are two possible effects of this act. One is that Congress, who originally enacted the Sherman Anti-Trust Act, may now declare a moratorium in the application of that act. It may also clarify its own attitude as to whether or not it has or does wish to invade a field that may be subject to state regulation so long as the Congress has not invaded that field. Although prohibition of interstate commerce in this regard is a regulation thereof, appellees have not even been able to cite any authority that would require that appellant obtain the consent of the state of California to insure one of its citizens or to employ an

agent to assist in an interstate transaction where the locale of the business is outside of that state.

We would again ask counsel how appellees can state that they wish to prescribe standards which must be adhered to by appellant before making such transactions when they have already admitted that no such regulations exist by the State of California and that any attempt to in any manner transact an insurance business with a resident of California will not be permitted by that state regardless of the standards maintained by the appellant. The only possible application the said Public Law 15 could have in this matter would be that Congress does not wish at this time to regulate the insurance business.

VI.

Under section VI of their brief, appellees again state that they are entitled to a dismissal of this action under the Eleventh Amendment and the gist of the entire matter seems to be that if the acts complained of in the complaint are unconstitutional or illegal or, done under the authority of an unconstitutional law, then the action is one against the officers, but that if the acts complained of are legal, constitutional acts within the authority of a constitutional and legal law, then they are against the state.

Ex parte Young, 209 U. S. 123, 28 S. Ct. 441, 52 L. Ed. 714, 13 L. R. A. N. S., 932, 14 Ann. Cas. 764.

Greene v. Louisville & Interurban R. R. Co., 244 U. S. 499, 37 S. Ct. 673, 61 L. Ed. 1280.

Gunter v. Atlantic Coast Line R. Co., 200 U. S. 73, 283.

We see no point in entering into a long argument to determine whether or not certain acts are legal and constitutional or performed under the authority of a constitutional statute and then entering into precisely the same argument to determine whether or not the action is one against the state. It so happens that this question is disposed of by the determination of appellant's right to relief itself.

In closing it should be borne in mind that two motions were filed by appellees in the Court below. One was for Dismissal and the other for a More Definite Statement. The Motion for a more definite statement was not disposed of for the reason that the motion to dismiss was granted without leave to amend, and a judgment of dismissal with costs rendered in favor of the appellees.

This could be based only upon the proposition that the issues involved herein are outside the jurisdiction of the trial Court. We submit that this is not the law of this case and that the decision of the lower Court should be reversed.

Respectfully submitted,

ROBERT R. WEAVER,

EARL BLODGETT,

Attorneys for Appellant.

No. 11040.

IN THE

United States Circuit Court of Appeals

FOR THE NINTH CIRCUIT

FIRST NATIONAL BENEFIT SOCIETY,

Appellant,

vs.

MAYNARD GARRISON, Insurance Commissioner of the
State of California, and H. F. RISBROUGH and MAE
BARR LONG, Deputy Insurance Commissioners of the
State of California,

Appellees.

PETITION FOR REHEARING.

Upon Appeal from the District Court of the United States for the
Southern District of California, Central Division.

ROBERT R. WEAVER,
404 First National Bank Building, Phoenix, Ariz.,

EARL BLODGETT,
417 South Hill Street, Los Angeles 13, Calif.,
Counsel for Appellant.

FILED
JUN 29 1946

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No. 11040.

IN THE

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FOR THE NINTH CIRCUIT

FIRST NATIONAL BENEFIT SOCIETY,

Appellant,

vs.

MAYNARD GARRISON, Insurance Commissioner of the State of California, and H. F. RISBROUGH and MAE BARR LONG, Deputy Insurance Commissioners of the State of California,

Appellees.

PETITION FOR REHEARING.

Comes now the First National Benefit Society, the above named appellant and petitions the court for rehearing of the above entitled case on the following grounds, to wit:

I.

The plaintiff (appellant herein) complained of many acts of the defendants which it alleged constituted a campaign to destroy the business of the plaintiff in the State of California.

One of these contentions was such acts as threatening with arrest and arrest of agents such as F. O. Robertson,

named in the said complaint. The Court has upheld the decision in the lower court on the authority of the *Robertson* case. We wish to call the Court's attention to the fact that the Robertson incident is only one of the type of acts complained of in the said complaint. In paragraph II of the complaint [Tr. pp. 6-8], the plaintiff (appellant herein) has alleged that the defendants have advised the *members* of the said Society to forfeit their certificates therein, and that they have told members of the Society that these certificates were "illegal" and that they were "not worth the paper they were written on," and otherwise entered upon a campaign of molestation and interference of the said plaintiff. The complaint further states [Tr. p. 7] that the certificates of the plaintiff are legal, authorized by law and that the statements of the defendants are untrue and were, by the said defendants, known to be untrue.

The said complaint further definitely sets out the names of certain members of the said Society which the said defendants had molested and to whom they had represented that they could not collect on plaintiff's policies, and to whom they had stated that plaintiff's policies were illegal [Tr. pp. 7-8]. The said complaint further alleges that the said members were legally acquired by the said plaintiff.

That plaintiff's second cause of action sets forth the continual interference with the members of the said Society, advising them to drop their insurance therein and to obtain insurance in other companies. That the said second cause of action, by reference, incorporates therein paragraphs I, II, III and IV of its first cause of action. That paragraph II of said first cause of action [Tr. p.

3] sets forth that the plaintiff has many members in the State of California, some acquired by application by mail and others by reinsurance [Tr. p. 3].

The complaint alleges that plaintiff (appellant herein) had secured many members by taking their applications while they were residents of the State of Arizona where the plaintiff is authorized to do business and that subsequent thereto they had moved their residence from Arizona to the State of California and that the defendants herein had counselled them to drop their insurance with appellant [Tr. p. 10]. The complaint sets out some of the names of the defendants who actually gave such counsel to legitimate members of the plaintiff and some of the names of those who were counselled to drop their insurance [Tr. pp. 9-10].

All of these matters are alleged to have caused and would continue to cause great and irreparable injury to the plaintiff. These acts have no connection with the Commerce Clause, and there is no statute of the State of California authorizing them. They are illegal by the law of the State of California and in violation of the Fifth Amendment and the Fourteenth Amendment to the Constitution of the United States. These matters constitute the entire second cause of action set forth in the complaint. They were not disposed of in the opinion of the trial court and the decision in the *Robertson* case (*F. O. Robertson v. The People of the State of California*, October Term, 1945, No. 274, decided June 3, 1946) is in no way applicable to them. The complaint sets these matters out by allegations in due form. They constitute fundamental rights of this plaintiff and we respectfully and earnestly request this court to pass its judgment upon them.

Plaintiff has alleged, in the said complaint, this type of interference not only in specific language and in referring to specific instances, but has alleged that many acts of similar nature, constituting a campaign to destroy the business of the plaintiff in California, has been indulged in by the plaintiff, and has also alleged such similar acts in general terms and that under these pleadings plaintiff would be entitled to prove the acts alleged and stands ready to prove them, and similar acts, such as advising newspapers to refuse advertising of the plaintiff; advertisements for agents with no specification that the agents were to work in California. The complaint also alleges that these acts were too numerous to be set forth in full [Tr. p. 8].

The lower court in its opinion in this case held (in line with a multitude of authorities) that if the acts of the officers complained of were acts not sanctioned by the law or done under the authority of an unconstitutional law, the suit would be one against the officers and not against the state. A few cases upholding this principle are:

Sterling v. Constantine, 287 U. S. 378, 53 S. Ct. 190, 77 L. Ed. 375;

Elmer v. Wallace, 275 Fed. 86;

Great Atlantic & Pac. Tea Co. v. Valentine, 12 F. Supp. 760; Affirmed as *Valentine v. Great Atlantic & Pac. Tea Co.*, 299 U. S. 32, 57 S. Ct. 56, 81 L. Ed. 22.

This matter was disposed of in the lower court on a Motion to Dismiss, which was sustained without leave to amend. The only matter disposed of in the Court's opinion was the contention of appellant that the acts of the defendants were in violation of the Commerce Clause of

the Constitution of the United States. Appellant's second cause of action, setting out in detail the acts of the defendants constituting a ^{destruction} ~~desecration~~ of legally obtained business with people who are now residents of California, has not been mentioned. These acts are in no way connected with interstate commerce and there is no law in the State of California or elsewhere to authorize such acts. They constitute a plain invasion of the property rights of this appellant without the faintest color of authority or law and are mere unauthorized personal acts of the defendants and each of them. These are the statements of the complaint and for the purpose of this appeal must be assumed to be true.

Appellant therefore respectfully petitions this Court to make its order granting a rehearing of the case in regard to those allegations.

Respectfully submitted,

ROBERT R. WEAVER,

EARL BLODGETT,

Counsel for Appellant.

Certificate of Counsel.

I, counsel for the above-named appellant, do hereby certify that the foregoing petition for rehearing of this cause is presented in good faith and not for delay.

ROBERT R. WEAVER,

EARL BLODGETT,

Counsel for Appellant.

No. 11046

United States
Circuit Court of Appeals
For the Ninth Circuit.

ESTATE OF ETHEL M. DuVAL, Deceased, by
Thomas M. Robinson, Jr., and Weston Shattuck
Robinson, as Executors of her last will and
testament,

Petitioner,

vs.

COMMISSIONER OF INTERNAL REVENUE,
Respondent.

Transcript of the Record

Upon Petition to Review a Decision of the Tax Court
of the United States

FILED

JUN 12 1945

PAUL P. O'BRIEN,
CLERK

No. 11046

United States
Circuit Court of Appeals
For the Ninth Circuit.

ESTATE OF ETHEL M. DuVAL, Deceased, by
Thomas M. Robinson, Jr., and Weston Shattuck
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Upon Petition to Review a Decision of the Tax Court
of the United States

ARTICLE

OF THE

CONSTITUTION OF THE UNITED STATES

AND

OF THE

SEVERAL STATES

AND

OF

THE

UNITED STATES

OF AMERICA

AND

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[Clerk's Note: When deemed likely to be of an important nature, errors or doubtful matters appearing in the original certified record are printed literally in *italic*; and, likewise, cancelled matter appearing in the original certified record is printed and cancelled herein accordingly. When possible, an omission from the text is indicated by printing in *italic* the two words between which the omission seems to occur.]

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APPEARANCES

For Taxpayer:

M. W. DOBRZENSKY, Esq.,
JAMES H. ANGLIM, Esq.

For Comm'r:

ARTHUR L. MURRAY, Esq.,

Docket No. 4731

THOMAS M. ROBINSON, JR., and WESTON SHATTUCK ROBINSON, as Executors of the last will and testament of ETHEL M. DuVAL, Deceased, (Amended Title) ESTATE OF ETHEL M. DuVAL, Dec'd., by Thomas M. Robinson, Jr., and Weston Shattuck Robinson as Executors of her last will and Testament. Order of 5/17/44.

Petitioners,

vs.

COMMISSIONER OF INTERNAL REVENUE,
Respondent.

DOCKET ENTRIES

1944

- May 1—Petition received and filed. Taxpayer notified. Fee paid.
- May 1—Request for Circuit hearing in San Francisco filed by taxpayer. 5/5/44 granted.
- May 5—Copy of petition served on General Counsel.

1944

May 12—Motion to amend caption of petition filed by taxpayer.

May 17—Order that the caption of the proceeding at the above docket number be amended to read “Estate of Ethel M. DuVal, Dec’d., by Thomas M. Robinson, Jr., and Weston Shattuck Robinson, as Executors of her last will and testament, entered.

May 30—Answer filed by General Counsel.

June 3—Copy of answer served on taxpayer. San Francisco, Calif.

Aug. 10—Hearing set Sept. 18, 1944, at San Francisco, Calif.

Sep. 18—Hearing had before Judge Van Fossan on the merits. Submitted. Appearance of James H. Anglin, Esq., filed. Briefs due Oct. 18, 1944—replies Nov. 7, 1944.

Oct. 14—Transcript of hearing of 9/18/44 filed.

Oct. 16—Brief filed by taxpayer.

Oct. 16—Brief filed by General Counsel. Copy served 10/16/44.

Nov. 2—Reply brief filed by General Counsel.

Nov. 3—Reply brief filed by taxpayer. 11/3/44 copy served.

1945

Feb. 2—Findings of fact and Opinion rendered. Van Fossan, J. Decision will be entered for the respondent. Copies served.

Feb. 3—Decision entered, Van Fossan J. Div. 9.

Mar. 23—Petition for review by U. S. Circuit Court of Appeals, 9th Circuit, with assignments of error filed by taxpayer.

1945

Mar. 23—Proof of service filed. (Petition for review, statement and praecipe).

Mar. 23—Statement of points, with proof of service thereon filed by taxpayer.

Mar. 23—Praecipe filed. [1*]

The Tax Court of the United States

Docket No. 4731

THOMAS M. ROBINSON, JR., and WESTON
SHATTUCK ROBINSON, as Executors of
the last will and testament of ETHEL M.
DuVAL, Deceased,

Petitioners,

vs.

COMMISSIONER OF INTERNAL REVENUE,
Respondent.

PETITION

The above named petitioners hereby petition for a redetermination of the deficiency set forth by Respondent in his notice of deficiency dated February 23, 1944 (IRA:ET:90-D-WCW) and as a basis of their proceeding allege:

I. (1) Ethel M. DuVal was a resident of the County of Alameda, State of California, and died therein on April 9, 1942.

*Page numbering appearing at top of page of original certified Transcript of Record.

(2) Your petitioners are the duly appointed qualified and acting Executors of the last will and testament of said decedent which was admitted to probate by the Superior Court of the State of California, in and for the County of Alameda, Proceeding No. 80585.

(3) Petitioners duly filed with the Collector of Internal Revenue for the First District of California, a Federal Estate Tax return for the estate of said decedent, paying thereon a Federal Estate tax of \$15,596.28.

(4) Thereafter, the Internal Revenue Agent in Charge at San Francisco, California, notified your petitioners of his [2] intent to adjust the Federal Estate tax liability of said estate by disallowing as a deduction from the gross estate, item 17 of Schedule K of the estate's Federal Estate Tax Return, a probate claim in the sum of \$175,000.00.

(5) Thereafter, petitioners protested said proposed deficiency in the sum of \$48,214.31. The protest was denied.

(6) On February 23, 1944, the Respondent, by said Internal Revenue Agent in Charge, advised petitioners by registered letter dated February 23, 1944, that his determination of the estate tax liability of the estate of said decedent disclosed a deficiency of \$48,214.31. A copy of said letter and notice of deficiency is annexed hereto, made a part hereof and marked Exhibit "A".

(7) This petition is filed for the purpose of obtaining a redetermination of said deficiency.

II. The following is a specification of each and

every error which petitioners allege have been committed by respondent:

(1) Respondent erred in failing and refusing to recognize that under the laws of the State of California, the jurisdiction in which the estate of said decedent is being administered and in which these transactions took place, decedent in her lifetime had incurred, and at the date of her death had, a direct, immediate and unconditional personal liability and obligation to Bank of America National Trust & Savings Association upon her endorsements and guarantees of the notes of M. K. Blake Estate Co. in the sum of \$175,000.00. [3]

(2) Respondent has disregarded the provisions of the law of California under which the \$175,000.00 probate claim is allowed and allowable as a claim against the estate of said decedent.

(3) Respondent asserts that the claim should be disallowed

(a) because the maker of the notes is solvent;

(b) because the co-guarantor and co-endorser is solvent;

(c) because no part of the claim has been paid;

(d) because it has not been shown that the estate of said decedent will ever be required to pay any amount in satisfaction of said claim;

whereas, Section 812(b)(3) of the Internal Revenue Code authorizes a deduction for "claims against the estate" of such amounts "as are allowed by the laws of the jurisdiction * * * under

which the estate is being administered” and does not preclude the deduction of the claim because of the four items above specified, or because of any of them.

(4) Respondent erred in that he asserts that the claim for \$175,000.00 should be disallowed under Section 812(b)(3) of the Internal Revenue Code “since the estate need suffer no loss because of any payment required to be made by the executors would immediately be compensated by the accompanying rights of subrogation from the other endorser and guarantor”, whereas, under the law of California, there is no liability on the part of either the maker of the note guaranteed to reimburse the guarantor or on the part of the co-guarantor to contribute to the guarantor unless and until he has been compelled to pay the debt and accordingly, [4] as of the date of decedent’s death, there was no right to “immediately be compensated” or otherwise by alleged accompanying rights of subrogation or contribution susceptible of evaluation in terms of money as of the date of decedent’s death.

(5) Respondent has erred in holding that since the claim has not been paid and may not be paid it should be disallowed, whereas the right to deduct a claim against the estate allowable under the laws of the jurisdiction in which decedent’s estate is being administered, under the Federal Estate Tax Law is not conditioned upon payment of the claim.

(6) Respondent has erred by asserting a discretion on his part to disallow the claim on asserted general rules of law, or, on the basis of al-

leged equitable considerations, whereas the petitioners' right to deduct the claim for Federal Estate Tax purposes is a matter of statutory right under Section 812(b) of the Internal Revenue Code and is not dependent on any basis of equity or upon any general rules of law.

(7) Respondent has failed and refused to recognize that the claim which he has disallowed is based on the personal liability of the decedent existing as of the time of her death and prior thereto and is one allowed by the laws of California, the jurisdiction in which the estate of said decedent is being administered.

(8) Respondent erred in disallowing the said claim for \$175,000.00.

III. The following is a statement of the facts relied upon by the petitioners as sustaining the aforesaid assignment of errors: [5]

(1) The M. K. Blake Estate Company is a California corporation and decedent was a shareholder thereof.

(2) On August 17, 1937, said corporation borrowed from Bank of America National Trust & Savings Association at Oakland, California, the sum of \$162,000, evidenced by the makers' promissory note of even date therewith and which said note was secured by the makers' deed of trust of even date therewith.

(3) At the time said note was executed and delivered and as a part of the same transaction and at the request of said Bank the decedent joined in the execution of the following contract endorsed on the back of said note:

“For value received, I hereby guarantee payment of the within obligation and all renewals or extensions thereof and I hereby Waive Presentment, Demand, Protest, Notice of Protest and Notice of Nonpayment.

ETHEL M. DuVAL

MARY J. ROBINSON”

(4) On November 2, 1941, said M. K. Blake Estate Company borrowed the further sum of \$20,000 from said Bank, which said note is secured by the same deed of trust referred to in paragraph (2) hereof.

(5) At the time said \$20,000 note was executed and delivered and as a part of the same transaction and at the request of said Bank, the decedent joined in the execution of the following contract endorsed on the back of said note:

“For Value Received, I hereby guarantee payment of the within obligation and all renewals or extensions thereof and all taxes and [6] insurance premiums and any other sums that may become due and payable under and by virtue of the provisions of the deed of trust (or mortgage) securing the aforesaid note, and I hereby Waive Presentment, Demand, Protest, Notice of Protest and Notice of Non-Payment.

I also hereby waive (a) the right, if any, to the benefit of, or to direct the application of, any security hypothecated to the holder until all indebtedness of the maker to the holder, howsoever arising, shall have been paid; (b)

the right to require the holder to proceed against the maker, or to pursue any other remedy in the holders' power; and agree that the holder may proceed against the undersigned directly or independently of the maker, and that cessation liability of the maker for any reason other than payment, any extension, forbearance, change of rate of interest or acceptance, release or substitution of security or any impairment or suspension of the holders' remedies or rights against the maker, shall not in anywise affect the liability of the undersigned hereunder.

MARY J. ROBINSON
ETHEL M. DuVAL"

(6) The unpaid balance of the principal sum of said notes on the date of decedent's death was the sum of \$175,000.00.

(7) Ethel M. Du Val, said decedent, was a resident of Alameda County, California, at the time of her death on April 9, 1942. Thereafter such proceedings were had in the Superior Court of the State of California, in and for the County of Alameda in a proceeding therein entitled "In the Matter of the Estate of Ethel M. DuVal, deceased", No. 80585 and that letters testamentary upon the will of said decedent were issued out of said court by the Clerk and under the seal thereof to your petitioners above named who thereupon became, ever since have been and now are the [7] executors of the last will and testament of said decedent. The administration of the estate of said decedent has

been pending in said court since the death of said decedent and is now pending therein.

(8) Bank of America National Trust & Savings Association, holder of said notes, endorsed and guaranteed by said decedent, as above set forth, filed its verified claim in the sum of \$175,000 against the estate of said decedent, which is a probate proceeding pending in the Superior Court of the State of California, in and for the County of Alameda, State of California, No. 80585 in the files and records of said Court. Said claim was delivered to the executors and filed with the Court within the time allowed for presenting claims and was allowed in writing by the executors for the full amount thereof and was presented by the executors to the Judge of said Court for approval who endorsed his approval thereon in the full amount of said claim and said claim as so allowed and approved was filed with the Clerk of said Court within thirty (30) days thereafter. Said claim was and is a claim allowed by the laws of California, the jurisdiction in which the estate of said decedent is being administered.

(9) On October 25, 1943, petitioners as such executors filed in said Court in said Probate Proceeding their first account and report of their administration, in which said account and report and in Schedule C thereof they reported to said Court the fact of the filing of said claim for \$175,000 on the contracts specified in paragraphs (3) and (5), supra, and reported said claim as an allowed and approved claim. On November 5, 1943, [8] said

court by its order settled and allowed and approved, said account and report.

(10) The said notes to which said endorsement and guarantee relate have not been paid nor has any part of the principal thereof been paid, except as hereinbefore stated.

(11) The amount of said claim in the sum of \$175,000, as allowed and approved by the executors and the court as aforesaid, was included as a deduction for Federal Estate Tax purposes as item 17 of Schedule K of the Federal Estate Tax return for the estate of said decedent, filed by petitioners.

(12) Respondent has disallowed said item of deduction in the sum of \$175,000, as shown in Exhibit "A" which is annexed hereto, and proposes to assess an additional Federal Estate Tax against the estate of said decedent in the sum of \$48,214.31.

(13) The law of California, as established by the statutes of that state and by the decisions of the courts thereof, being the laws of California, the jurisdiction under which the estate of said decedent is being administered and under which said claim is allowed and allowable and which are germane to the several matters set forth in this petition, is not pleaded herein for the reason that petitioners understand that since this Court takes judicial notice of such statutes and decisions, the same are not required to be pleaded.

Wherefore, petitioners pray that the Court may hear this petition and determine that petitioners are not liable for additional Federal Estate Tax, as asserted by Respondent, or [9] otherwise, or at all and that it be determined that said claim in the

sum of \$175,000.00 is a proper deduction from the gross estate of said decedent.

April 25, 1944.

M. W. DOBRZENSKY

Counsel for Petitioners. [10]

EXHIBIT A

(Copy)

SN-ET-1

Treasury Department
Internal Revenue Service
74 New Montgomery Street
San Francisco 5, California

Feb. 23, 1944.

Office of
Internal Revenue Agent
in charge
San Francisco Division
IRA :ET-90-D
WCW

Estate of Ethel M. Du Val, Deceased
Thomas M. Robinson, Jr., and
Weston S. Robinson, Executors
c/o Fitzgerald, Abbott & Beardsley,
1516 Central Bank Building,
Oakland, California.

MT-ET-11904-First California
Estate of Ethel M. Du Val
Date of Death: April 9, 1942

Gentlemen:

You are advised that the determination of the estate tax liability of the above-named estate, discloses a deficiency of \$48,214.31, as shown in the

statement attached.

In accordance with the provisions of existing internal revenue laws, notice is hereby given of the deficiency mentioned.

Within 90 days (not counting Sunday or a legal holiday in the District of Columbia as the 90th day) from the date of the mailing of this letter, you may file a petition with The Tax Court of the United States, at its principal address, Washington 25, D. C., for a redetermination of the deficiency.

Should you not desire to file a petition, you are requested to execute the enclosed form and forward it to the Internal Revenue Agent in Charge, San Francisco 5, California, for the attention of Conference Section. The signing and filing of this form will expedite the closing of your return by permitting an early assessment of the deficiency, and will prevent the accumulation of interest, since the interest period terminates 30 days after filing the form, or on the date assessment is made, whichever is earlier.

Respectfully,

HAROLD N. GRAVES,

Acting Commissioner,

(Signed) By R. L. SUTHERLAND

Acting Internal Revenue

Agent in Charge.

Enclosures:

Statement

Form of waiver [11]

ESTATE TAX

San Francisco

IRA:ET:90-D

WCW

MT-ET-11904-First California

Estate of Ethel M. Du Val

Date of Death: April 9, 1942

Statement

	Liability	Assessed	Deficiency
Estate Tax	\$62,516.50	\$14,302.19	\$48,214.31

In making this determination of the Federal estate tax liability of the above-named estate, careful consideration has been given to the protest dated December 15, 1943, and to statements made at a conference held January 17, 1944.

A copy of this letter and statement has been mailed to your representative, Mr. M. W. Dobrzensky, care of Fitzgerald, Abbott & Beardsley, 1516 Central Bank Building, Oakland, California, in accordance with the authority contained in the power of attorney executed by you.

Adjustments to Net Estate

Net estate for basic tax as disclosed by return.....\$ 15,596.28

Net estate for additional Tax as disclosed by return \$ 77,596.28

Additions to value of net estate and
decreases in deductions:

(a) Decreases in deductions, debts of
decendent, Item 17, Schedule K
of return\$175,000.00 175,000.00

Additions to value 0.00

Total.....\$252,596.28

Reductions in value of net estate and
increases in deductions:

(b) Error in Line 1, Schedule Q of return.....	2,000.00
Net estate for additional tax as adjusted.....	\$250,596.28
Net estate for basic tax as adjusted.....	\$190,596.28

[12]

Explanation of Adjustments

(a) Debts of decedent, Schedule K of return

Item 17—Bank of America

	Returned	Determined
N.T.&S.A.	\$175,000.00	\$ 0.00

On August 17, 1937 and November 2, 1941, the decedent and another had endorsed and guaranteed the payment of two notes upon which the M. K. Blake Estate Co., a corporation, was principally liable as maker. Said notes were secured by deed of trust upon real estate owned by the corporation and the unpaid balance upon the said notes of the corporation amounted to \$175,000.00 at date of decedent's death. The corporation had not defaulted upon the obligation and had a net worth over and above all liabilities of over \$650,000.00. The other accommodation endorser is also solvent. A claim for the full amount was filed against decedent's estate and said claim was allowed and approved by her executors and the probate court. No part of the claim for \$175,000.00 has been paid and it has not been shown that the estate of decedent will ever be required to pay any amount in satisfaction of such claim. It is held that the deduction claimed in the return is not an allowable deduction under

section 812(b)(3) of the Internal Revenue Code since the estate need suffer no loss because of any payment required to be made by the executors would immediately be compensated by the accompanying rights of subrogation against the corporation primarily liable and contribution from the other endorser and guarantor.

(b) Net Estate for the Additional Tax, Schedule Q of the return.

	Returned	Determined
Line 1, Gross Estate.....	\$302,207.48	\$300,207.48

The gross estate was erroneously stated in this schedule of the return as above set forth, resulting in an overstatement of the net estate of \$2,000.00. This error is corrected by substitution of the proper figure.

Computation of Estate Tax

	Returned	Determined
Gross estate for basic tax.....	\$300,207.48	\$300,207.48
Deductions for basic tax	284,611.20	109,611.20
Net estate for basic tax	\$ 15,596.28	\$190,596.28
Net estate for additional tax.....	\$ 77,596.28	\$250,596.28
		[13]
	Returned	Determined
Gross basic tax	\$ 4,217.89	
Credit for State inheritance, etc., taxes	3,374.31	
Net basic tax		\$ 843.58
Total gross taxes (basic & additional) \$	65,890.81	
Gross basic tax	4,217.89	
Net additional tax		61,672.92
Total tax payable		\$ 62,516.50

Estate tax assessed:

Original, April 1943 List, page 103, line 4—

First California District 14,302.19

Deficiency\$ 48,214.31

[14]

State of California,

County of Adameda—ss.

Thomas M. Robinson, Jr., and Weston Shattuck Robinson, each being duly sworn, for himself deposes and says: I am one of the petitioners named in the foregoing Petition, that is to say, I am one of the duly appointed, qualified and acting executors of the last will and testament of Ethel M. DuVal, deceased and as such have authority to act for her estate; that I have read the foregoing petition and am familiar with the statements contained therein and that the statements contained therein are true, except those stated to be on information and belief and that those he believes to be true.

THOMAS M. ROBINSON, Jr.

WESTON SHATTUCK ROBINSON

Subscribed and sworn to before me this 25th day of April, 1944.

[Seal]

CONSTANCE E. MULVANY

Notary Public in and for the County of Alameda,
State of California.

[Endorsed]: Filed T.C.U.S. May 1, 1944. [15]

[Title of Tax Court and Cause.]

ANSWER

Comes now the Commissioner of Internal Revenue, respondent above named, by his attorney, J. P. Wenchel, Chief Counsel, Bureau of Internal Revenue, and for answer to the petition filed by the above-named petitioners, admits and denies as follows:

I. (1) and (2) Admits the allegations contained in subparagraphs (1) and (2) of paragraph I of the petition.

(3) Admits that petitioners duly filed with the Collector of Internal Revenue for the First District of California, a Federal Estate Tax return for the estate of said decedent, but denies the remaining allegations contained in subparagraph (3) of paragraph I of the petition.

(4) Admits the allegations contained in subparagraph (4) of paragraph I of the petition. [16]

(5) Admits the allegations contained in subparagraph (5) of paragraph I of the petition.

(6) Admits the allegations contained in subparagraph (6) of paragraph I of the petition.

(7) Admits the allegations contained in subparagraph (7) of paragraph I of the petition.

II. (1) to (8), inclusive. Denies that the Commissioner erred in the determination of the deficiency, as alleged in subparagraphs (1) to (8), inclusive, of paragraph II of the petition.

III. (1) to (7), inclusive. Admits the allegations of fact contained in subparagraphs (1) to (7), inclusive, of paragraph III of the petition.

(8) and (9) For lack of information, denies the allegations contained in subparagraphs (8) and (9) of paragraph III of the petition.

(10) Admits the allegations contained in subparagraph (10) of paragraph III of the petition.

(11) Admits that the amount of said claim in the sum of \$175,000.00 was included as a deduction for Federal Estate Tax purposes as item 17 of Schedule K of the Federal Estate Tax return for the estate of said decedent, filed by petitioners, but denies the remaining allegations contained in subparagraph (11) of paragraph III of the petition. [17]

(12) Admits the allegations contained in subparagraph (12) of paragraph III of the petition.

(13) For lack of information, denies the allegations contained in subparagraph (13) of paragraph III of the petition.

IV. Denies generally and specifically each and every allegation in the petition not hereinbefore admitted, qualified, or denied.

Wherefore, it is prayed that the Commissioner's

determination be approved and the petitioners' appeal denied.

(Signed) J. P. WENCHEL TMM

Chief Counsel, Bureau of In-
Revenue.

Of Counsel:

B. H. NEBLETT,

Division Counsel,

T. M. MATHER,

Special Attorney, Bureau of
Internal Revenue.

TMM/vg 5-25-44

[Endorsed]: Filed T.C.U.S. May 30, 1944. [18]

[Title of Tax Court and Cause.]

4 T. C. No. 84

Promulgated February 2, 1945

Where a bank, owner of a claim against decedent as guarantor of notes, consents to distribution of the estate without payment of its claim, reserving, however, a claim against a co-guarantor, and where the estate will never be required to pay the claim.

Held, such claim is not deductible from the gross estate of decedent, although formally allowed by a court having jurisdiction of the settlement of the estate.

M. W. Dobrzensy, Esq., and James H. Anglim, Esq., for the petitioners.

Arthur L. Murray, Esq., for the respondent.

The respondent determined a deficiency in estate

tax of \$48,214.31 against the Estate of Ethel M. DuVal.

The single issue is whether the sum of \$175,000, representing the balance due on notes of a corporation, payment of which was guaranteed by the decedent and another, may be deducted from gross estate as a debt of the decedent, where the maker of the notes was financially able to [19] pay them.

FINDINGS OF FACT

Ethel M. DuVal, hereinafter referred to as the decedent, died testate on April 9, 1942, and at the time of her death, was a resident of Alameda County, California. The petitioners, Thomas M. Robinson, Jr. and Weston Shattuck Robinson, are the duly qualified and acting executors of the decedent's will, which was admitted to probate by the Superior Court of Alameda County. The estate tax return was filed by them on April 15, 1943, with the collector of internal revenue for the first district of California.

On August 17, 1937, the M. K. Blake Estate Co., hereinafter called the company, secured a loan from the Bank of America National Trust and Savings Association of Oakland, California, hereinafter called the bank, in the sum of \$162,000., payable three years thereafter, evidenced by the company's promissory note of the same date and secured by a deed of trust executed the same day.

At the same time, and at the bank's request, the decedent and her sister, Mary J. Robinson, endorsed the note as follows:

For value received, I hereby guarantee payment of the within obligation and all renewals or extensions thereof and I hereby waive presentment, demand, protest, notice of protest and notice of nonpayment.

(Signed) ETHEL M. DuVAL

MARY J. ROBINSON

On November 2, 1941, the company borrowed from the bank an additional \$20,000, payable August 2, 1944, giving its promissory note therefor. The second obligation was also secured by the deed of trust above referred [20] to. The note was endorsed by the decedent and her sister in the following manner:

For value received, I hereby guarantee payment of the within obligation and all renewals or extensions thereof and all taxes and insurance premiums and any other sums that may become due and payable under and by virtue of the provisions of the deed of trust (or mortgage) securing the aforesaid note, and I hereby waive presentment, demand, protest, notice of protest and notice of nonpayment.

I also hereby waive (a) the right, if any, to the benefit of, or to direct the application of, any security hypothecated to the holder until all indebtedness of the maker to the holder, howsoever arising, shall have been paid; (b) the right to require the holder to proceed against the maker, or to pursue any other remedy in the holder's power; and agree that the holder may proceed against the undersigned

directly or independently of the maker, and that cessation of liability of the maker for any reason other than payment, any extension, forbearance, change of rate of interest or acceptance, release or substitution of security or any impairment or suspension of the holder's remedies or rights against the maker, shall not in anywise affect the liability of the undersigned hereunder.

At the time the above notes were executed and endorsed, the decedent and her sister, Mary J. Robinson, were the owners of a majority of the company's outstanding capital stock. The decedent was president of the company and Mary J. Robinson was its secretary.

On August 26, 1941, the company and the bank joined in an agreement extending the maturity date of the note for \$162,000 to August 2, 1944. The decedent and Mary J. Robinson gave their written consent to the extension.

At the decedent's death the unpaid balance of the principal of the two notes amounted to \$175,000. No part of this amount has been paid since her death. [21]

After the decedent's death the bank presented its claim for \$175,000 against her estate, said claim providing that it was made "by virtue of the guaranty of said deceased of two promissory notes of M. K. Blake Estate Co., a corporation, dated August 17, 1937, and November 2, 1941, respectively." The claim was delivered to the executors in June

1942 and allowed by them July 1942 for its full amount.

The decedent, by her will, created a residuary trust, naming M. W. Dobrzensky as trustee and as residuary devisee and legatee in trust. Shortly prior to March 15, 1943, a plan was agreed upon between the executors and their attorney (M. W. Dobrzensky) whereby the decedent's estate could be distributed. The plan provided that the entire estate should be distributed to the trustee subject to the payment of the bank's claim. This plan has never been carried out.

In response to a request by the trustee, Dobrzensky, the bank, on March 17, 1943, sent to him a "Consent to Distribution" providing that the bank "hereby consents to the distribution of the above entitled estate without payment of its claim, reserving, however, its claim against Mary J. Robinson, who, with said decedent, guaranteed said promissory note."

At the same time, the bank sent to the trustee a "Withdrawal of Request for Special Notice."

On April 7, 1943, the claim was approved by the Judge of the Superior Court of Alameda County, California.

On October 25, 1943, the executors of the decedent's will filed with the probate court their first account, in which they reported the [22] claim for \$175,000 as an allowed and approved claim. This account was approved by order of the court on November 5, 1943.

At the date of the decedent's death, and at all

times since, to the date of the hearing herein, both the maker of the notes, the M. K. Blake Estate Co., and the co-guarantor, Mary J. Robinson, have been solvent and fully able to pay the notes in question.

At Schedule K of the estate tax return the executors of the decedent's will claimed a deduction for the \$175,000 as a debt of the decedent. The respondent disallowed the deduction and determined the deficiency here in dispute.

OPINION

Van Fossan, Judge:

This case involves an alleged claim for \$175,000 against the estate of decedent. The deduction is sought under section 812(b) (3) of the Internal Revenue Code prior to its amendment by section 405 of the Revenue Act of 1942.¹

¹Sec. 812. Net Estate.

For the purpose of the tax the value of the net estate shall be determined, in the case of a citizen or resident of the United States by deducting from the value of the gross estate—

* * * *

(b) Expenses, Losses, Indebtedness, and Taxes.
—Such amounts—

* * * *

(3) for claims against the estate,

* * * *

as are allowed by the laws of the jurisdiction, whether within or without the United States, under which the estate is being administered, but not including any income taxes upon income received after the death of the decedent, or property taxes not accrued before his death, or any estate, succession, legacy, or inheritance taxes. The deduction herein allowed in the case of claims against the

The cited section allows a deduction for such claims against the estate as are allowed by the laws of the jurisdiction under which the estate is being administered to the extent that they were contracted bona fide and for an adequate consideration in money or money's worth.

The so-called claim grew out of the transactions in which decedent and her sister guaranteed two notes of a corporation, of which decedent was president and the sister was secretary, and in which they owned a majority of the stock, the notes being held by a bank. The corporation and the surviving co-guarantor were both solvent and fully able to pay the amount of the claim at all material times. There has been no default on the notes or other event fixing the liability of the guarantor.

The bank's claim for \$175,000 was presented to the executors in June, 1942 and approved by them July 1, 1942. On March 17, 1943, the bank (owner of the claim) filed a written "consent to distribution" of the estate without payment of the notes, reserving, however, its claim against decedent's co-guarantor. On the same date the bank withdrew its request for special notice of proceedings in the above entitled estate. On April 7, 1943, the claim was approved by the Judge of the Superior Court of Alameda County, California. Although the consent to distribution was in the hands of petitioners'

estate, unpaid mortgages, or any indebtedness shall, when founded upon a promise or agreement, be limited to the extent that they were contracted bona fide and for an adequate and full consideration in money or money's worth. * * *

attorney at the time, whether or not the court was advised of the action of the bank in filing such a consent to distribution, does not appear. We deem this fact to be significant.

On this set of facts petitioners asks us to approve the claim as a deduction from the taxable estate and contends that it is wholly immaterial [24] that the claim will not be paid by the estate. They cite numerous cases in support, all of which we have examined. None of them involves a question of the fact of the existence of a bona fide claim. They involve the question whether a valid existing claim must be paid prior to deduction. Nor does any of them involve a consent to distribution or a waiver of rights, such as are here present. All such cases are distinguishable from the present case.

Not every claim which may be presented and allowed by the probate court will be allowed as a deduction under the cited section. Only claims which are enforceable against the estate may be deducted. *United States v. Mitchell*, 74 Fed. (2d) 571.

A claim is an assertion of a right. If there be no assertion of a right or if the right to assert has been relinquished or abandoned, there is no claim. Thus, if, in fact, there was no claim by the bank actually pending when the court purported to approve the claim, then the court's action was a nullity and without legal effect.

From the tenor of the "consent to distribution", especially its specific reservation of the claim against the co-guarantor, we conclude that as to

petitioners, the bank had abandoned its claim and relinquished its right. It follows that the purported approval of the claim by the court was a vain and ineffective action of no legal standing or binding effect. The consequence is that, for Federal tax purposes, there was no valid or bona fide claim outstanding on the part of the bank and no basis for a deduction from the gross estate.

That the approval of the petitioners' contention would lead to absurd [25] ends is readily to be seen if it be assumed that there were a third co-guarantor who had also died and whose estate was pressing a claim identical in all respects with petitioners'. The same facts would require, under petitioners' contention, that we approve as deductions from the estate two claims of \$175,000, neither of which will ever be paid. The statement of such a situation is its own refutation.

The view we take in the instant case makes unnecessary consideration in detail of the several contentions advanced by petitioners. The situation is even stronger for the Government than that before the court in *Buck v. Helvering*, 73 Fed. (2d) 760, where the court said:

* * * In view of this peculiar and unusual liability, a liability that in the case of a solvent and going corporation is not at all likely ever to be enforced where in practical effect the stockholders' liability is rather that of surety than that of a primary debtor, although as a matter of law the liability of the stockholder is primary, we hold that the payment by the cor-

poration of its indebtedness should be considered as satisfying the claim against the estate as of the date of the death of the deceased. If the debt of the corporation is paid by the corporation before it is paid by the stockholder, the liability of the stockholder is extinguished. For purposes of appraisement of the estate for the fixing of the Federal estate tax, the stockholders' liability should be considered as a potential claim rather than an actual claim, until it is paid by the estate or it is reasonably certain that it must be paid.

In the present case the liability does not attain to the dignity of a potential claim. In point of fact, there is no claim at all. The position of petitioners is much weaker than that present in *Charles H. Lay*, 40 B.T.A. 522, where we said:

Of course, if when decedent died, there had been indebtedness to [the creditor] for money borrowed by the decedent, the claim would have been deductible in full. [26] Doubtless, the Commissioner would not contend otherwise,

but where an estate is liable only as a surety or endorser, it cannot take any deduction because of such liability where the principal has ample assets to pay the indebtedness. Cf. *Buck v. Helvering*, supra; *Parrott v. Commissioner*, 30 Fed. (2d) 792.

Upon the facts presented, the respondent's determination is sustained.

Decision will be entered for the respondent. [27]

The Tax Court of the United States
Washington

Docket No. 4731

ESTATE OF ETHEL M. DuVAL, Deceased, by
THOMAS M. ROBINSON, JR., and WES-
TON SHATTUCK ROBINSON, as Executors
of her last will and testament,

Petitioner,

vs.

COMMISSIONER OF INTERNAL REVENUE,
Respondent.

DECISION

Pursuant to the determination of the Court, as
set forth in its Findings of Fact and Opinion, pro-
mulgated February 2, 1945, it is

Ordered and Decided: That there is a deficiency
in estate tax of \$48,214.31.

(Signed ERNEST H. VAN FOSSMAN,
Judge.

Entered: Feb. 3, 1945. [28]

In the United States Circuit Court of Appeals
for the Ninth Circuit

[Title of Cause.]

PETITION FOR REVIEW BY THE UNITED
STATES CIRCUIT COURT OF APPEALS
FOR THE NINTH CIRCUIT OF A DE-
CISION BY THE UNITED STATES TAX
COURT

The petitioners in this cause hereby petition the United States Circuit Court of Appeals for the Ninth Circuit to review the decision entered by the Tax Court of the United States on February 3, 1945, 4 T. B. No. 84, determining deficiency in the petitioners' Federal Estate Tax in the sum of \$48,-214.31. This Petition for Review is filed pursuant to the provisions of Sections 1141 and 1142 of the Internal Revenue Code.

1.

JURISDICTION

Ethel M. DuVal was a resident of the County of Alameda, State of California, and died therein on April 9, 1942. The petitioners are the duly appointed, qualified and acting executors of the last will and testament of said decedent, which said will was admitted to probate by the Superior Court of the State of California, [29] in and for the County of Alameda, Proceeding No. 80585. The Federal Estate Tax return made on behalf of decedent's estate was filed with the Collector of Internal Revenue for the First District of California, whose

office is located at San Francisco, California, within the jurisdiction of the United States Circuit Court of Appeals for the Ninth Circuit.

2.

NATURE OF THE CONTROVERSY

This controversy involves the propriety of the deduction by the executors from the gross estate of the decedent of the claim of Bank of America National Trust and Savings Association in the sum of \$175,000.00, based upon a guaranty executed by decedent and her sister, of certain promissory notes of M. K. Blake Estate Company, a corporation, of which decedent and her sister were shareholders, the guaranties being required by the said lending bank.

Both guarantees under the California law are absolute and unconditional, (the guarantors expressly waiving presentment, demand, protest, notice of protest and notice of non-payment) and imposed direct, immediate and unconditional liability on decedent from the date of their execution.

The notes which were guaranteed were secured by a deed of trust on the property of the borrowing corporation. At the time of decedent's death the unpaid balance of the two notes was \$175,000.00.

The bank filed its claim in the estate proceedings in California within the time and in the manner prescribed by the Probate Law of California. This claim, based on the direct personal obligation [30] of decedent, was duly allowed by the executors, approved by the Court and filed.

The executors and their attorney (who was also the testamentary trustee named in decedent's will and to whom the entire residue of decedent's estate is distributable in trust under her will) agreed upon a plan of distribution for decedent's estate whereby it was to be distributed to the trustee, subject to the payment of the bank's claim. This plan remains in effect and the estate will be so distributed.

After this plan for distribution was agreed upon, the attorney and testamentary trustee telephoned to the Vice President of the bank whom he had known for twenty years. He told him that the estate could not be distributed without the bank's consent, once the claim was allowed and approved. He also told him of the plan to distribute the residue of the decedent's estate to the trustee in trust under decedent's will, subject to the bank's claim and asked him if the bank, "on that basis", would consent to the distribution of the estate without payment of the bank's claim.

The Vice President said that he believed that the bank would so consent and wrote the attorney the following day, stating that "in accordance with your request" he was enclosing a "Consent to Distribution" whereby the bank consented to the distribution of the estate without payment of its claim.

The executors filed their first account and report, reporting this claim as duly allowed and approved, whereupon, by operation of law, the claim became an acknowledged debt of the [31] estate, payable in due course of administration and uncontestable.

In the Federal Estate Tax return of the estate of said decedent, filed by petitioners, Item 17 of Schedule K thereof, petitioners included a deduction for this claim in the sum of \$175,000.

This was disallowed by the Internal Revenue Agent in Charge who by reason of the disallowance determined a proposed deficiency in the sum of \$48,214.31.

The Internal Revenue Agent in Charge in overruling the protest of the petitioners and assessing the additional tax, said, *inter alia*

“ * * * No part of the claim for \$175,000.00 has been paid and it has not been shown that the estate of the decedent will ever be required to pay any amount in satisfaction of such claim, it is held that the deduction claimed in the return is not an allowable deduction under section 812(b)(3) of the Internal Revenue Code, since the estate need suffer no loss, because any payment required to be made by the executors would immediately be compensated by the accompanying rights of subrogation against the corporation primarily liable and contribution from the other endorser and guarantor”.

The matter was tried before the United States Tax Court in San Francisco and the Tax Court has rendered its findings and decision herein holding that the claim was not deductible.

In its opinion, the Tax Court erroneously concludes that there was no default in the notes or other event “fixing the liability of the guarantor”,

disregards the undisputed evidence showing the condition under which the consent to distribution was requested and given, viz.—that the estate would be distributed to the trustee, subject to the claim, holds that the bank “had abandoned its claim and relinquished its rights”, that the “purported approval of the claim by the court was a vain and ineffectual action of no [32] legal standing or binding effect”, that there was “no valid or bona fide claim outstanding on the part of the bank and no basis for a deduction from the gross estate”, that the approval of petitioners’ contention “would lead to absurd ends”, that the “liability does not attain to the dignity of a potential claim” and that there “is no claim at all”, that the claim was not “enforceable against the estate”, all as more particularly shown in the following Specification of Errors.

As a result, the Tax Court affirmed the asserted deficiency in the sum of \$48,214.31.

The petitioners, at the trial, offered evidence to prove that alleged “rights over” (i.e. alleged rights of contribution, subrogation and reimbursement) had no fair market value and the objection to the testimony was sustained, although such evidence is the crucial point for determining the deductability of a claim such as this.

3.

ASSIGNMENT OF ERRORS

Petitioners and the estate of said decedent being aggrieved by certain findings of fact not supported by substantial evidence in the record and by certain

of the conclusions of law, set forth in the decision of the Tax Court, which findings, opinion and decision they hold do not have warrant in the record and a reasonable basis in the law, desire to obtain a review of the decision by the United States Circuit Court of Appeals for the Ninth Circuit. [33]

Wherefore, petitioners pray that the United States Circuit Court of Appeals for the Ninth Circuit may review said findings of fact and opinion and decision of the Tax Court of the United States and that appropriate action be taken to the end that the errors herein complained of may be reviewed and corrected by said Court.

March 15, 1945.

M. W. DOBRZENSKY

JAMES H. ANGLIM

Counsel for Petitioners on
Review [35]

State of California,
County of Alameda—ss.

M. W. Dobrzensky, being first duly sworn, deposes and says that he is one of the counsel of record for petitioners in the above named cause; that as such counsel he is authorized to verify the foregoing petition for review; that he has read the said petition and is familiar with the statements contained therein; and that the statements made are true to the best of his knowledge, information and belief.

M. W. DOBRZENSKY

Subscribed and sworn to before me this 15th day of March, 1945.

[Seal]

ELEANOR DALL

Notary Public in and for the County of Alameda,
State of California.

[Endorsed]: Filed T.C.U.S. Mar. 23, 1945. [36]

In the United States Circuit Court of Appeals
for the Ninth Circuit

[Title of Cause.]

STATEMENT OF POINTS

Comes now the Estate of Ethel M. DuVal, deceased, by Thomas M. Robinson, Jr. and Weston Shattuck Robinson, as executors of her last will and testament, the petitioners on review herein, by and through their attorneys, M. W. Dobrzensky and James H. Anglim, and hereby assert the following errors on which they intend to rely in this review:

1. The Tax Court erred in holding that decedent's direct and primary liability on the absolute and unconditional guaranty could not form the basis for a claim deductible from decedent's gross estate under I.R.C. Section 812(b)(3).

2. The Tax Court erred in treating decedent's primary liability on the absolute and unconditional guaranty as less than a "potential claim" and in denying deductibility of the claim on that account and because of the solvency of the maker and co-guarantor of the notes.

3. The Tax Court erred in arbitrarily rejecting testimony offered by petitioners to prove that alleged "rights over" (i.e. alleged rights of contri-

bution, subrogation and reimbursement) had no fair market value on the date of decedent's death.

[37]

4. The Tax Court erred in arbitrarily and capriciously making a partial finding of fact that conveys the erroneous idea that a plan for distributing decedent's estate has been abandoned, which partial finding is contrary to the undisputed evidence.

5. The Tax Court erred in arbitrarily and capriciously failing to find the facts and circumstances and conditions under which the testamentary trustee requested and the bank gave its consent to distribution, which facts, circumstances, and conditions are shown by the undisputed evidence.

6. The Tax Court erred in construing the legal effect of the consent to distribution as a waiver of the bank's claim and as a relinquishment of its rights, disregarding the facts, circumstances and conditions under which it was requested and given.

7. The Tax Court erred in concluding that the approval of the bank's claim by the Probate Judge "was a vain and ineffectual action of no legal standing or binding effect."

8. The Tax Court erred in concluding, contrary to law, that the approval of petitioners' contention "would lead to absurd ends", thus invading the province of the Congress, which should act if the law is unwise or requires change.

Dated March 15, 1945.

M. W. DOBRZENSKY

JAMES H. ANGLIM

Counsel for Petitioners on
Review

Service of the within Statement of Points is hereby admitted March 23, 1945.

J. P. WENCHEL SLY

Chief Counsel, Bureau of Internal Revenue.

Attorney for Respondent on Review

[Endorsed]: Filed T.C.U.S. Mar. 23, 1945. [38]

[Title of Tax Court and Cause.]

NOTICE OF FILING OF PETITION
FOR REVIEW

To John P. Wenchel, Esq., Chief Counsel, Bureau of Internal Revenue, Washington, D. C.

Please Take Notice that on March 23, 1945, petitioners filed with the Clerk of The Tax Court of the United States at Washington, D. C., a petition for the review by the United States Circuit Court of Appeals for the Ninth Circuit of the decision of the above entitled Court heretofore rendered in the above entitled cause. A copy of (1) the Petition for Review and the assignment of errors, together with a copy of each of (2) Designation for Record on Review, and (3) Statement of Points, all as filed [39] herein are delivered herewith and served upon you.

Dated March 23, 1945.

M. W. DOBRZENSKY

JAMES H. ANGLIM

Attorneys for Petitioners

Personal service of the foregoing notice, together with receipt of copies of the (1) Petition for Review, (2) Designation of Record on Review and (3) Statement of Points therein mentioned, is hereby acknowledged.

March 23, 1945.

J. P. WENCHEL SLY

Chief Counsel, Bureau of Internal Revenue.

Counsel for Respondent.

[Endorsed]: Filed T.C.U.S. Mar. 23, 1945. [40]

[Title of Tax Court and Cause.]

PROCEEDINGS

Date September 18, 1944.

THOMAS M. ROBINSON, JR.,

called as a witness on behalf of the Petitioner, testified as follows:

Direct Examination [41a]

Q. Now Mr. Robinson, I show you Petitioner's Exhibit No. 2, the claim of the Bank of America. Are you familiar with that claim?

A. (Examining document.) Yes, I am.

Q. And you are the Thomas M. Robinson whose approval is endorsed thereon on the first day of July, 1942?

A. Yes, sir.

Q. Are you familiar with the promissory notes that are part of that exhibit?

A. I am.

Q. And with the endorsements and guarantees that appear on the reverse thereon?

A. Yes, I am.

Q. And were those notes guaranteed by Ethel M. DuVal and Mary J. Robinson?

A. Yes. They were asked by the bank to do it.

Mr. Dobrzensky: That is all. [41]

Mr. Dobrzensky: I will call R. W. Kattrelle.

Whereupon,

R. W. KATTRELLE,

called as a witness for and on behalf of the Petitioner, having been first duly sworn, was examined and testified as follows:

Direct Examination

The Clerk: Please state your name.

The Witness: R. W. Kattrelle—K-a-t-t-r-e-l-l-e. [42]

Mr. Dobtzensky: I desire to qualify this witness as an expert appraiser.

By Mr. Dobrzensky:

Q. What is your business?

A. I am a real estate broker and appraiser.

Q. How long have you been engaged in that business?

A. Thirty-eight years, a little over.

Q. Are you at the present time employed in the capacity as an appraiser for any concern or concerns?

(Testimony of R. W. Kattrelle.)

A. I am the appraiser for the Central Bank of Oakland, and have been for the last 17 years; and for the First Federal Savings, Alameda Federal Savings, Connecticut Mutual Life Insurance Company, and quite a few others.

Q. As such an appraiser do you appraise real property? A. Yes.

Q. Do you appraise personal property?

A. Yes.

Q. Tangible personal property?

A. Yes, sir.

Q. Intangible personal property?

A. Yes, sir.

Q. Have you had occasion, during the period you have indicated, to testify in court as an expert appraiser? A. Yes, sir.

Q. For all of those types of property? [43]

A. Yes.

Q. In what courts have you testified as an expert appraiser?

A. Well, the Alameda County Courts, the Federal Court here in San Francisco, and the local courts across the Bay, Superior Court, and so forth.

Q. Now, you have examined the claim, the bank's claim, which is Petitioner's Exhibit 2 in this case? A. Yes, sir.

Q. And the promissory notes that are attached thereto? A. That is right.

Q. And the contracts of guaranty that have been endorsed thereon? A. Yes, sir.

(Testimony of R. W. Kattrelle.)

Q. And you are familiar with the rights of the parties? A. Yes.

Mr. Dobrzensky: We submit that this witness, your Honor, is a qualified appraiser.

The Court: Please rise when you address the court.

Mr. Dobrzensky: Pardon me, your Honor.

The Court: Have you any objection?

Mr. Murray: No, I have no objection. I admit that he is a qualified appraiser of real property and——

The Court: That is all we need at the present time. [44]

Mr. Dobrzensky: And personal property, too.

The Court: Proceed with your questions.

Mr. Murray: As a matter of fact, I would like to have that question read back, if you would, because he stated that sitting down. Did you ask him a question yet?

Mr. Dobrzensky: Only to qualify him as a witness.

Mr. Murray: I will admit he is a qualified real estate appraiser, if that is what he is asking.

The Court: You may proceed.

Mr. Dobrzensky: The first question is a hypothetical question.

By Mr. Dobrzensky:

Q. Ethel M. DuVal, who died April 9, 1942, in her lifetime, with her sister, Mary J. Robinson, endorsed and guaranteed certain promissory notes for

(Testimony of R. W. Kattrelle.)

M. K. Blake Estate Company, in favor of Bank of America, National Trust & Savings Association, for the principal balance of \$175,000 payable August 2, 1944, and interest thereon at the rate of $4\frac{1}{2}$ per cent ($4\frac{1}{2}\%$) per annum, which said principal balance remains unpaid and if Ethel M. DuVal's estate is required to pay the entire amount of said notes at some indeterminate time after April 9, 1942, it will, after making such payment, then be entitled to a right of contribution against Mary J. Robinson, if Mary J. Robinson is then alive (or against her estate if she is then deceased and if the time for filing claims against [45] her estate has not expired), which right of contribution would be a right to recover from Mary J. Robinson or her estate to the extent of one-half of the amount of said indebtedness paid by the Ethel M. DuVal estate. What, if anything, on the date of Ethel M. DuVal's death on April 9, 1942, was the fair market value of her estate's said right of contribution which would arise upon such payment being made by such estate at some indeterminate time after April 9, 1942, that is to say, at what price, if any, would such right of contribution have changed hands on April 9, 1942 between a willing seller and a willing buyer thereof, neither being under any compulsion to sell or to buy?

Mr. Murray: I would like to object to that question on a couple of grounds, if your Honor please. In the first place, I submit that this witness is not

(Testimony of R. W. Kattrelle.)

qualified to answer that question because it, in turn, involves a legal principle, and to which this man has shown no qualifications.

I object otherwise on the basis that this question is incompetent, irrelevant and immaterial.

I think I will leave my objection there.

Mr. Dobrzensky: May it please the Court, it very frequently has arisen in cases before the United States Tax Court, when they are reviewed, that the upper court has said that there is no evidence upon a particular point, and we feel that if there is to be a value of any sort attached to the [46] alleged accompanying rights of contribution and subrogation, which are set forth in the 90-day letter of the Commissioner, we are entitled to show by a hypothetical question, setting forth the facts and conditions as we deem them to exist, to an expert witness that the alleged right of contribution had no market value as of that date, and that it is competent for us to show by this witness, who has testified that he has appraised real and personal property, tangible and intangible property, what value, if any, this right of recovery that the paying guarantor might have against his co-guarantor, as of the vital date, April 9, 1942, the date of the death of decedent.

We submit it is proper to receive such evidence and that the question is not argumentative, but sets forth all of the facts and circumstances upon which an evaluation could be predicated.

The Court: I sustain the objection.

(Testimony of R. W. Kattrelle.)

Mr. Dobrzensky: At this time, may it please the Court I offer to prove by the testimony of this witness on the stand, in answer to this question, that the answer to the question would be that the right of contribution would have no market value.

The Court: Very well.

Mr. Dobrzensky: Now, I have similar questions, may it please the Court, with reference to the alleged right [47] of subrogation and the alleged right of reimbursement and, if I may, I would like to read them.

The Court: We will recess until 2:00 this afternoon.

(Whereupon, at 12:30 p.m., a recess was taken until 2:00 p.m. of the same day.) [48]

Afternoon Session

Whereupon,

R. W. KATTRELLE

resumed his testimony as follows:

Direct Examination—(Resumed)

Mr. Dobrzensky: Just before the noon recess your Honor sustained the objection to the hypothetical question which was asked the witness with respect to the alleged right of contribution.

Would it be too much to ask your Honor, on which of the grounds the objection was sustained?

The Court: Let the record stand as it is.

By Mr. Dobrzensky:

(Testimony of R. W. Kattrelle.)

Q. Mr. Kattrelle—this question, your Honor, refers to subrogation.

Ethel M. DuVal, who died on April 9, 1942, in her lifetime, with her sister, Mary J. Robinson, endorsed and guaranteed certain promissory—

May I reserve an exception to your Honor's ruling in the record?

The Court: You may.

By Mr. Dobrzensky:

Q. Resuming the question—certain promissory notes for M. K. Blake Estate Company, in favor of Bank of America, N. T. & S. A., in the principal balance of \$175,000 payable [49] August 2, 1944, and interest thereon at the rate of four and one-half per cent ($4\frac{1}{2}\%$) per annum, which said principal balance remains unpaid and, if Ethel M. DuVal's estate is required to pay the entire amount of said notes at some indeterminate time after April 9, 1942, it will, after making such payment, then be entitled to a right of subrogation, that is to say, a right by means of a civil action to have and enforce any security which said bank or the holder of said notes had at the time of such payment thereof by the estate, which said right of subrogation is not a tangible right of such a nature and character that it can be seized or held or enjoyed independently of a judicial proceeding. What, if anything, on the date of Ethel M. Duval's death on April 9, 1942, was the fair market value of said estate's right of subrogation which would arise upon such payment

(Testimony of R. W. Kattrelle.)

being made by said estate at some indeterminate time after April 9, 1942, that is to say, at which price, if any, would such right of subrogation have changed hands on April 9, 1942, between a willing seller and a willing buyer thereof, neither being under any compulsion to sell or to buy?

Mr. Murray: Same objection, if your Honor please.

The Court: I sustain the objection.

Mr. Dobrzensky: An exception, please.

Now, I offer by this witness on the stand, your Honor, to prove that in answer to this question his testimony would be that such right had no fair market value on April 9, [50] 1942.

By Mr. Dobrzensky:

Q. The third question:

Ethel M. DuVal, who died on April 9, 1942, in her lifetime, with her sister, Mary J. Robinson, endorsed and guaranteed certain promissory notes for M. K. Blake Estate Company, in favor of Bank of America, N. T. & S. A., in the principal balance of \$175,000, payable August 2, 1944, and interest thereon at the rate of four and one-half per cent ($4\frac{1}{2}\%$) per annum, which said principal balance remains unpaid and, if Ethel M. DuVal's estate is required to pay the entire amount of said notes at some indeterminate time after April 9, 1942, it will, after making such payment, then be entitled to a right of reimbursement against the M. K. Blake Estate Company, that is to say, a right

(Testimony of R. W. Kattrelle.)

to recover from the M. K. Blake Estate Company the full amount paid on its said notes to the holder thereof. What, if anything, on the date of Ethel M. DuVal's death on April 9, 1942, was the fair market value of said right of reimbursement which would arise upon such payment being made by said estate at some indeterminate time after April 9, 1942, that is to say, at what price, if any, would the right of reimbursement have changed hands on April 9, 1942, between a willing seller and a willing buyer thereof, neither being under any compulsion to sell or to buy?

Mr. Murray: Same objection [51]

The Court: I sustain the objection.

Mr. Dobzensky: Note an exception.

Now, we offer by this witness on the stand, your Honor, to prove that, in answer to the question on which your Honor has just ruled, that the testimony would be, in answer thereto, that the right of reimbursement would have no fair market value.

That is the case for the Petitioner, your Honor.

Mr. Murray: If your Honor please, the Respondent's case consists of an offer of——

The Court: Is there any cross examination of this witness?

Mr. Murray: No cross examination.

The Court: You are excused.

(Witness excused.)

Mr. Murray: The Respondent's case consists of an offer of a couple of more documents and some oral stipulations by counsel.

I have no witnesses. [52]

M. W. DOBRZENSKY,

called as a witness for and on behalf of the Petitioner, having been first duly sworn, was examined and testified as follows:

Direct Examination

By Mr. Anglim:

Q. Mr. Dobrzensky, you are the M. W. Dobrzensky who certified to the Federal Estate Tax Return in this matter as one of the attorneys for the Executors, are you not? A. I am.

Q. You are also the M. W. Dobrzensky named in the will of the decedent, the residuary devisee and legatee in trust? A. I am.

Q. I show you the letter dated March 17, 1943, from A. E. Caldwell, Vice President of the Bank of America National Trust and Savings Association, addressed to you, this being Respondent's Exhibit "D". I ask you, Mr. Dobrzensky, did you receive that letter and enclosures therein mentioned?

A. I did.

Q. Did you know Mr. Caldwell prior to the time you received this letter?

A. I did.

Q. How long had you known him?

A. Oh, I would say 20 to 22 years.

Q. This letter states "In accordance with your request" this Consent to Distribution is being sent to you. Did you request Mr. Caldwell to send the Consent to Distribution to you? A. I did.

Q. Was that request oral or in writing?

A. It was oral.

(Testimony of M. W. Dobrzensky.)

Q. When did it occur?

A. On the 15th day of March, 1943.

Q. What conversation did you have with him on that day?

Mr. Murray: I object to that, if your Honor please, as being irrelevant and immaterial to this case. The document speaks for itself and what other conversations took place, I submit, are irrelevant and immaterial.

Mr. Anglim: I submit it is material to the issues here involved because the Respondent is contending that this Consent to Distribution is something equivalent to a waiver of the claim. I want to show the circumstances under which the Consent to Distribution was given.

The Court: He may answer.

The Witness: Will you read the question, Mr. [54] Reporter?

(The question was read by the reporter.)

Mr. Murray: May I have an exception?

The Court: Yes.

A. I called Mr. Caldwell on the telephone on the 15th of March and re-called his attention to the fact that the Bank, Bank of America, had filed a claim for \$175,000 in the Estate of Ethel M. DuVal, deceased. I told him that the claim had been allowed by the Executors and would shortly be presented to the court for approval, and that when it was allowed and approved the estate could not be distributed without the consent of the Bank. I told him

(Testimony of M. W. Dobrzensky.)

that, as he had known, I was the residuary legatee named in Mrs. DuVal's will to whom the estate would be distributed in trust and that our plan was to distribute the estate in trust subject to the Bank's claim. I asked him if, on that basis, the Bank would consent to distribution.

He said that he believed it would, and would let me know in the next day or two.

On the 17th of March, or the day following, I received the letter counsel showed me, enclosing the Consent to Distribution and the Withdrawal of Special Notice.

Mr. Murray: I move that that be stricken as irrelevant and immaterial. On the face of it it appears that the witness is attempting to say that the reason this claim [55] was so forgiven, I say claim, was because somebody else was going to assume it. I submit that is wholly irrelevant and immaterial to this issue.

The Court: Motion denied.

By Mr. Anglim:

Q. Prior to this conversation that you had with Mr. Caldwell, did you have a conversation with the Executors relative to a plan for the distribution of the estate? A. I did.

Q. When did that conversation occur?

A. I would say some time shortly prior to my conversation with Mr. Caldwell on the 15th, somewhere within a week before.

Q. Was a plan for the distribution of the estate thereupon agreed upon, or was a plan worked out?

(Testimony of M. W. Dobrzensky.)

A. Yes.

Q. What was that plan?

Mr. Murray: I would like to make the same objection to that question if your Honor please, as I did to the former question. It is wholly irrelevant and immaterial to this issue.

The Court: How is that related—is this the plan that was followed?

Mr. Anglim: Correct. I am merely attempting to show the natural progression of events there, that is, a conversa- [56] tion with the Executors by which a plan was worked out for the distribution of this estate, subject to the claim, if the consent of the Bank of America be obtained therefor.

The Court: He may answer.

The Witness: Will you read the question, please?

(The question was read by the reporter.)

A. The plan was that the entire residue and remainder of the estate of Ethel M. DuVal, deceased, should be distributed to me under the will as trustee of the trust named therein, subject to the payment of the claim of the Bank of America in the sum of \$175,000, based on the guarantees.

By Mr. Anglim:

Q. Mr. Dobrzensky, was any written record of this agreed plan of distribution ever made?

A. A letter which I addressed to the Executors confirming the plan on the 25th of March, 1943.

Mr. Anglim: I think that is all.

(Testimony of M. W. Dobrzensky.)

Cross Examination

By Mr. Murray:

Q. This plan that you speak of, Mr. Dobrzensky, has never been carried out, has it?

A. No. The estate has not yet been distributed, but the plan is still in existence and that is the way we will distribute the estate.

Q. I understood counsel to state that this was the plan [57] that was carried out. There has been no carrying out of anything, has there?

A. The estate has not yet been distributed, correct, but it will be distributed according to the plan.

Mr. Murray: If your Honor please, I renew my objection and ask that it be stricken as not being relevant or material in this case.

The Court: I myself interpreted counsel's statement the same as indicated.

Mr. Anglim: I didn't indicate that the estate had been distributed.

The Court: You said the plan had been carried out.

Mr. Anglim: I don't think the record will disclose that. If that is a fact I didn't intend, so intend the question. I merely wanted to know whether or not the plan had been agreed upon, this particular plan that is indicated in that progression of events, first the conversation with the Executors, then the conversation with Mr. Caldwell, then the Consent to Distribution, the actual Consent to Distribution, and the withdrawal by the Bank of the request for special notice.

(Testimony of M. W. Dobrzensky.)

The Court: I will let the record stand.

By Mr. Murray:

Q. Then, Mr. Dobrzensky, I understand that in accordance with this plan the trust intends to pay this note if the maker of the note doesn't? [58]

A. If called upon by the Bank, and it is in default, yes, the estate will be distributed subject to the plan.

Q. But the trust will pay, if anybody, from income, and the estate will be entirely out of it under this plan?

A. I can't answer the question that way. The estate remains subject to the jurisdiction of the Probate Court after administration and during the period of the trust, so it is still the Estate of Ethel M. DuVal, no longer the estate in the hands of the Executors, but in the hands of the trustee.

Q. But the estate cannot be distributed even to the trustees without this waiver, is that right?

A. That is correct, cannot be distributed without the waiver, rather, the consent to distribution, it is.

Q. I would also like to ask you this: You stated that a claim was filed by the Bank. With whom was the claim filed?

A. It was filed with the Executors, care of ourselves as attorneys. If you will look at the Notice to Creditors, which I think is our first exhibit, you will note that Notice to Creditors does direct that the claim shall be filed either with the County Clerk, or left at the offices of their attorneys, at

(Testimony of M. W. Dobrzensky.)

1516 Central Bank Building, and the claim was mailed directly to us at our office.

Q. You mean the attorneys for the estate?

A. Yes.

Q. The release that you received from the Bank on March [59] 16 or 17, 1943, was that the——

A. (Interposing) It was received, I think, on the same day, or the day after the 17th or 18th of March, 1943,

Q. Then that release was in your hands before you presented the claim to the court for approval?

A. That Consent to Distribution was in my hands.

Q. These documents that are in evidence then were in your hands before you even placed the claim before the court for approval?

A. That is correct.

Mr. Murray: That is all.

The Court: You may be excused. [60]

EXHIBIT B

Cable Address—Bamerical

13044

Bank of America

National Trust and Savings Association

Oakland Main Office

Oakland, California

March 17, 1943

Mr. M. W. Dobrzensky
Fitzgerald, Abbot & Beardsley
Central Bank Building
Oakland, California

In re: Ethel M. Du Val Estate

Dear Mr. Dobrzensky:

In accordance with your request, we are enclosing Consent to Distribution in the above named estate, reserving our claim, however, against Mary J. Robinson who is a co-guarantor on the note of M. K. Blake Estate Co.

There is also enclosed a Withdrawal of Request for Special Notice of proceedings.

Yours very truly,

A. E. CALDWELL

A. E. Caldwell

Vice President

AEC:g

Enclosures 2

#23376 [61]

EXHIBIT 8

April 17, '42.

I, Ethel M. Du Val, of the City of Oakland, County of Alameda, State of California, make my will as follows:

First: I hereby revoke all former wills by me made.

Second: (A) I give, devise and bequeath unto my niece, Ethel Robinson, if she be living at the time of my death, my residence at 315 Lenox Avenue, Oakland, California, together with the contents thereof (except library and books) including all furniture, furnishings, china, silverware, linens, rugs, pictures and all other items.

(B) I give, devise and bequeath unto my nephew, John Weston Havens, Jr., if he be living at the time of my death, all books situated in the library in my home at 315 Lenox Avenue, Oakland, California. I make no other or further provision herein for my said nephew, John Weston Havens, Jr., for the reason that he has been amply provided for by his late father who was my brother.

Third: If my husband, William M. Du Val, and my sister, Mary J. Robinson, or either of them, be living at the time of my death, I hereby give, devise and bequeath all of the rest, residue and remainder of my property of every kind and character and wheresoever situate, unto M. W. Dobrzensky, to have and to hold the same, in trust, nevertheless, for the following uses and purposes and upon the terms and conditions hereinafter set forth:

(1) The trustee during the existence of this

trust and to enable it to properly execute this trust, shall have full power to do each and all of the following things: To possess, manage, control, grant, sell, convey, partition, assign, transfer, lease for terms either within or extending beyond the duration of this trust, repair, alter, improve, exchange, [62] rent, mortgage, encumber, pledge, divide, subdivide, said trust property or any part or parcel thereof as to it may seem best; to hold and maintain any and all property and securities so received by it in trust or that may become a part of this trust during the existence thereof whether or not the same be legal for investment of trust funds in California or any other state; to receive all rents, profits and income from each and every part of the trust estate; to collect all income from whatever sources; to sell upon deferred payments; to borrow money for any trust purpose upon such terms and conditions as may be determined by the trustee and to obligate the trust estate for the repayment thereof; to create restrictions, easements and other servitudes; to carry such insurance as the trustee may deem advisable; to have respecting bonds or shares of stock or other securities all the rights, powers and privileges of an owner, including the power to give proxies, pay calls, assessments and other sums deemed by the trustee necessary for the protection of the trust estate; to participate in voting trusts, pooling agreements, foreclosures, reorganizations, consolidations, mergers and liquidations, and in connection therewith to deposit securities with and transfer title to any protective or

other committee under such terms as the trustee may deem advisable, and to receive and retain as an investment herunder any securities received through the exercise of the power of participation therein whether or not such securities are legal for investment of trust funds in California; to exercise or sell stock subscription or conversion rights; to hold with or without disclosure of this trust any securities in bearer form or in the name of the trustee or in the name of any other person and to exercise all of the rights, powers and privileges of an owner thereof through such nominee, but in the event the trustee causes or permits any securities to stand in the name of [63] a nominee the trustee shall be responsible for the acts and omissions of the nominee in respect to such securities to the same extent as if the securities stood in the name of the trustee; to retain during the existence of this trust in its discretion any of the property coming into its possession hereunder in the same form of investment as that in which it was received by the trustee; to commence or defend, whether before or during or after the probate administration of my estate, all actions or suits in law or in equity which the trustee deems should be commenced or defended in order to establish or maintain the validity of this trust or to defend this trust against legal or equitable attack or to preserve or protect any part or all of the trust estate; to enforce or collect by suit or otherwise any and all rights and obligations to which the trust estate is entitled or which shall be or become due or owing in connection with the trust estate; to

employ such attorneys, accountants and tax consultants and other assistants as may be deemed necessary or advisable by the trustee in connection with the administration of this trust; to incur all costs and expenses deemed by the trustee to be necessary or advisable in connection with the administration of this trust; to compromise or arbitrate or otherwise adjust any and all claims in favor of or against the trustee in connection with the trust estate; so make any settlement or compromise of any claim or litigation respecting any property or rights of the trust estate or pertaining to this trust; to budget the estimated annual income in order to equalize so far as practicable the periodical income payments to the beneficiary entitled to the same; to loan and reloan; invest and reinvest, each and every part of the trust estate in such property as may be legal for the investment [64] of trust funds under the laws of the State of California in existence at the time the investment is made; to determine in its discretion what is principal and what is income of the trust estate and what items shall be charged or credited to either except that in the event the trustee acquires any bonds, notes or other securities at a premium, that is, at a price or prices higher than face or par value thereof, the trustee shall amortize the premium paid for each such security from the interest and dividends or other income therefrom so as to restore the amount of such premium to the principal of the trust estate and except that all dividends paid by a corporation in its own shares of the same kind or rank as the stock upon which such

dividend is paid, and all stock subscription rights and amounts received upon the sale of such rights, and all liquidating dividends and all distributions from capital which the paying corporation states in writing delivered to the trustee to be such prior to the trustee's disbursement thereof, shall become a part of the principal of the trust estate and except that any income that my executor may receive upon my estate after my death that is distributed to the trustee shall constitute a part of the principal of the trust estate and shall be managed and disposed of by the trustee as a part of the principal of the trust estate; the enumeration of the foregoing powers of the trustee shall not limit its general powers, it being my intention to confer upon the trustee in the exercise of this trust all of the rights, powers and privileges which an absolute owner of the same property would have, save and except as aforesaid.

(2) The trustee from the gross income derived from the trust estate, or from the principal of the trust estate if the trustee deems that advisable, shall first pay as and [65] when due all taxes and assessments levied or assessed against any of the assets of the trust estate or against this trust (including all income taxes in connection with the trust that the trustee is required by law to pay) and all expenses of every kind or nature expended or incurred in the care, management or protection of the trust estate and of this trust and in the defense of this trust against legal or equitable attack either before or after the probate administration of my estate, and

also a reasonable compensation for the services of the trustee hereunder.

(3) Two hundred fifty dollars (\$250.00) of the net income derived from the trust estate shall be by the trustee paid monthly to my husband, William M. Du Val, so long as he shall live and the remainder of the net income, if any, shall be paid in convenient installments not less often than quarterly unto my sister, Mary J. Robinson, for and during the period of her life; the payment of income to my sister, Mary J. Robinson, herein provided for to be subject to the provisions of paragraph (7) of this division Third of my will.

(4) This trust shall continue during the lifetime of my husband, William M. Du Val, and my sister, Mary J. Robinson, and shall terminate upon the death of the last survivor of them.

(5) Upon the termination of this trust the entire trust estate then remaining in the hands of the trustee shall go to and be by the trustee paid, conveyed and transferred and delivered as follows: In equal shares to Ethel Robinson, Florence Robinson Dodge, Weston Shattuck Robinson and Thomas Maury Robinson, they being the four surviving children of my sister, Mary J. Robinson; provided, however, that if any of the said children of my sister, Mary J. Robinson, shall have [66] died prior to the termination of said trust leaving lineal descendants, then the share of such deceased child shall go to such lineal descendants share and share alike; and if any of said children of said Mary J. Robinson shall have died prior to the termination of said

trust without leaving any lineal descendants, then the share of said deceased child shall go to the other said children of said Mary J. Robinson, living at the time of the termination of said trust, and to the descendants of any deceased child, share and share alike, per stirpes and not per capita.

(6) Each and every beneficiary under this trust is hereby restrained from and is and shall be without right, power or authority to sell, transfer, pledge, mortgage, hypothecate, alienate, anticipate, or in other manner affect or impair his or her beneficial or legal right, title, interest, claim or estate in or to the income and principal or income or principal of this trust during the entire existence thereof, nor shall the right title, interest or estate of any beneficiary herein be subject to the rights or claims of creditors of said beneficiary nor subject nor liable to any process of law or court, nor subject to any bankruptcy proceedings of any kind, and all of the income, profits and principal under this trust shall be transferable, payable and deliverable only and solely to the beneficiaries entitled to take the same under the terms of this trust or their legal guardian.

(7) If in the opinion of the trustee the \$250.00 per month herein directed to be paid to my husband, William M. Du Val, is not sufficient to provide him with his reasonable needs during any period of illness or other emergency, the trustee is authorized as often as the trustee shall deem it necessary to pay to or use or expend for the use and benefit of my said husband [67] up to the remainder of the net income of the trust estate as the trustee in his sole

judgment and discretion shall deem necessary for such purpose or purposes.

(8) It is an express provision of this trust that it must continue for the full duration of the term stated herein and it shall in no event be terminated prior thereto by any legal proceeding or otherwise.

(9) No bond shall be required of my said trustee.

Fourth: In the event that neither my husband, William M. Du Val, nor my sister, Mary J. Robinson, shall be living at the time of my death, I give, devise and bequeath all of the rest, residue and remainder of my property of every kind and character and wheresoever situate unto the four surviving children of my sister, Mary J. Robinson, namely: Ethel Robinson, Florence Robinson Dodge, Weston Shattuck Robinson and Thomas Maury Robinson, share and share alike; provided, however, that if any of the said children of my sister, Mary J. Robinson, shall have died prior to the time of my death, leaving lineal descendants, then the share of such deceased child shall go to such lineal descendants share and share alike; and if any of said children of said Mary J. Robinson shall have died prior to the time of my death without leaving any lineal descendants, then the share of the said deceased child shall go to the other said children of said Mary J. Robinson living at the time of my death and to the descendants of any deceased child, share and share alike, per stirpes and not per capita.

Fifth: I specifically direct my executor to pay out of the general assets of my estate all taxes, including inheritance taxes and Federal estate taxes

which may be chargeable against my estate or against the gifts, bequests and devises [68] and interests under this will, or against the beneficial interests of the various beneficiaries under this will, including the various beneficiaries of the trust declared in this will, it being my intention that each and every gift, bequest and devise and interest under this will shall be delivered to and taken by every legatee, devisee and beneficiary hereunder in full free from any such taxes and without deduction.

Sixth: If an person or persons, who, if I died wholly or partly intestate, would be entitled to share in my estate, shall in any manner whatsoever directly or indirectly contest this will or oppose or attack or in any manner seek to impair or invalidate any provision of this will, or shall endeavor to succeed to any part of my estate other than through this will, then in each of such cases I hereby bequeath to such person or persons the sum of One Dollar (\$1.00) only.

Seventh: I hereby nominate and appoint Thomas Maury Robinson and Weston Shattuck Robinson, as executors of this, my last will and testament, to serve as such without bonds, and giving my said executors full power and authority to sell and dispose of any and all of my estate at either public or private sale, at such times and for such prices and on such terms as to them may seem best, with or without notice and without any order or authority of any court except such confirmation of their acts as may be required by law.

In Witness Whereof, I have hereunto set my hand this 7th day of May, 1941.

ETHEL M. Du VAL

The foregoing instrument, consisting of seven (7) pages besides this, was at the date thereof, by the said Ethel M. Du Val subscribed and signed and sealed and published as, and declared by her to be, her last will and testament, in the presence of us, who at her request and in her presence, and in the presence of each other, have subscribed the same as witnesses thereto.

S. RUBENSTEIN

residing at 4407 Edgwood Ave., Oakland, Calif.

HERBERT M. STRACHAN

residing at 6100 Ascot Drive, Oakland, Calif.

The foregoing instrument is a correct copy of the original on file in this office.

Attest: Sept. 7, 1944.

[Seal] G. E. WADE

County Clerk and ex-officio Clerk of the Superior Court of the State of California in and for the County of Alameda.

FRANK SCHNEFFLE

Deputy. [69]

In the United States Circuit Court of Appeals
for the Ninth Circuit

[Title of Cause.]

DESIGNATION OF RECORD ON REVIEW

To the Clerk of the Tax Court of the United States:

You will please prepare, transmit and deliver to the Clerk of the United States Circuit Court of Appeals for the Ninth Circuit copies, duly certified as correct, of the following documents and records in the above entitled cause in connection with the petition for review by said Circuit Court of Appeals for the Ninth Circuit, heretofore filed by the undersigned:

1. Docket entries of the proceedings before the Tax Court.

2. Pleadings before the Tax Court:

(a) Petition, including annexed copy of deficiency notice;

(b) Answer.

3. (a) Findings of Fact and Opinion (promulgated February 2, 1945) and (b) Decision of the Tax Court, entered February 3, 1945.

4. Petition for Review, together with proof of service of notice of filing of Petition for Review and of service of copy thereof.

5. Petitioner's Exhibit No. 8, offered in evidence at the trial before the Tax Court, being a copy of decedent's last will and testament.

6. Testimony (part) of petitioners' witness Thomas M. Robinson commencing with Line 1 of

Page 16 of the Official Record of the Proceedings, to and including Line 17 of Page 16.

7. Testimony of petitioner's witness R. W. Kirtelle, commencing with Line 17 of Page 18 of the Official Record of the Proceedings, continuing to and including Line 14 of Page 28 thereof.

8. Testimony of petitioners' witness, M. W. Dobrzensky, commencing with Line 6 of Page 33, of the Official Record of the Proceedings, continuing to and including Line 12 of Page 40 thereof.

9. Copy of letter dated March 17, 1943, from A. E. Caldwell, Vice President of Bank of America National Trust and Savings Association to M. W. Dobrzensky, attorney for petitioners, appearing at Lines 1 to 8 of Page 29 of the Official Record of the Proceedings, (Respondent's Exhibit B).

10. Statement of Respondent's counsel appearing at Lines 16-19 of page 28 of the Official Record of the Proceedings.

11. Statement of Points. [71]

12. Any and all orders enlarging time for the preparation, transmission and delivery of the record.

13. This Designation for Record.

Dated March 15, 1945.

M. W. DOBRZENSKY

JAMES H. ANGLIM

Counsel for Petitioners on
Review

[Endorsed]: Filed T.C.U.S. Mar. 23, 1945. [72]

[Title of Tax Court and Cause.]

CERTIFICATE

I, B. D. Gamble, clerk of The Tax Court of the United States do hereby certify that the foregoing pages, 1 to 72, inclusive, contain and are a true copy of the transcript of record, papers, and proceedings on file and of record in my office as called for by the Praecipe in the appeal (or appeals) as above numbered and entitled.

In testimony whereof, I hereunto set my hand and affix the seal of The Tax Court of the United States, at Washington, in the District of Columbia, this 9th day of April 1945.

[Seal]

B. D. GAMBLE

Clerk, The Tax Court of the
United States

[Endorsed]: No. 11046. United States Circuit Court of Appeals for the Ninth Circuit. Estate of Ethel M. DuVal, Deceased, by Thomas M. Robinson, Jr., and Weston Shattuck Robinson, as Executors of her last will and testament, Petitioner, vs. Commissioner of Internal Revenue, Respondent. Transcript of the Record. Upon Petition to Review a Decision of The Tax Court of the United States.

Filed April 23, 1945.

PAUL P. O'BRIEN

Clerk of the United States Circuit Court of Appeals
for the Ninth Circuit.

In the United States Circuit Court of Appeals
for the Ninth Circuit

Case No. 11046

ESTATE OF ETHEL M. DU VAL, Deceased, by
THOMAS M. ROBINSON, Jr., and WESTON
SHATTUCK ROBINSON, as executors of her
last will and testament,

Petitioners on Review,

vs.

COMMISSIONER OF INTERNAL REVENUE,
Respondent on Review.

DESIGNATION FOR RECORD ON REVIEW
AND STATEMENT OF POINTS

To the Clerk of the United States Circuit Court of
Appeals for the Ninth Circuit:

Pursuant to Rule 19(6) of your Court, we hereby
set forth a Statement of Points of Petitioners and a
designation of the parts of the record which we
think necessary for the consideration of the petition
for review of the decision of the Tax Court of the
United States, as follows:

1. Petitioners adopt in full the Statement of
Points filed in the Tax Court of the United States
and transmitted to you as part of the record in the
above entitled matter.

2. Petitioners adopt in full the Designation for
Record on Review filed in the Tax Court of the
United States and transmitted to you as a part of

the record in the above entitled matter, and in addition thereto designates this Designation for Record on Review and Statement of Points as a part of said record.

April 25, 1945.

M. W. DOBRZENSKY

JAMES H. ANGLIM

Attorneys for Petitioners on Review, 1516 Central
Bank Building, Oakland, 12, California

Service of a copy of the within Designation for Record on Review and Statement of Points is hereby admitted this 28 day of April, 1945.

SAMUEL O. CLARK, Jr.

Assistant Attorney General

.....

Attorney for Respondent

[Endorsed]: Filed May 1, 1945. Paul P. O'Brien,
Clerk.

No. 11,046

IN THE

United States Circuit Court of Appeals

For the Ninth Circuit

ESTATE OF ETHEL M. DUVAL, deceased, by
THOMAS M. ROBINSON, JR., and WESTON
SHATTUCK ROBINSON, as executors of her
last will and testament,

Petitioners,

VS.

COMMISSIONER OF INTERNAL REVENUE,

Respondent.

Upon Petition to Review a Decision of the Tax Court
of the United States.

PETITIONERS' OPENING BRIEF.

M. W. DOBRZENSKY,

JAMES H. ANGLIM,

Central Bank Building, Oakland 12, California,

Attorneys for Petitioners.

FILED

JUL 10 1945

PAUL P. O'BRIEN,
CLERK

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IN THE
United States Circuit Court of Appeals
For the Ninth Circuit

ESTATE OF ETHEL M. DUVAL, deceased, by
THOMAS M. ROBINSON, JR., and WESTON
SHATTUCK ROBINSON, as executors of her
last will and testament,

Petitioners,

vs.

COMMISSIONER OF INTERNAL REVENUE,

Respondent.

Upon Petition to Review a Decision of the Tax Court
of the United States.

PETITIONERS' OPENING BRIEF.

1.

JURISDICTIONAL STATEMENT.

By this proceeding, the above named petitioners seek a redetermination of a deficiency in federal estate taxes determined by respondent to be payable on account of the death of decedent.

The petitioners, as executors of decedent's estate, probated in Alameda County, California, filed their federal

(NOTE): All *emphasis* herein is by petitioners, unless otherwise stated.

estate tax return in the office of the Collector of Internal Revenue for the First District of California, at San Francisco, California. The Collector's office is within the jurisdiction of the above entitled Court for the Ninth Circuit.

The provisions of Sections 1141 and 1142 of the Internal Revenue Code give jurisdiction to this Court.

The pleadings necessary to the existence of jurisdiction are the petition for redetermination of deficiency (T. pp. 3-17) and the answer thereto (T. pp. 18-20).

2.

STATEMENT OF THE CASE AND QUESTIONS INVOLVED ON APPEAL.

(a) Statement of the case.

1. This petition for review is concerned with the deductibility from decedent's gross estate of the claim of Bank of America National Trust and Savings Association for \$175,000, based on decedent's absolute and unconditional guaranty of two notes of M. K. Blake Estate Company.

2. Mrs. DuVal and her sister Mary J. Robinson were shareholders of the M. K. Blake Estate Company (T. p. 23). The corporation borrowed money from Bank of America N. T. & S. A., evidenced by its notes (T. pp. 21-22) and secured by a deed of trust on its realty (T. p. 21).

3. The bank required Mrs. DuVal and her sister, Mrs. Robinson, to endorse and guarantee these notes, which they did (T. pp. 21 and 41).

4. Each of the two guarantees involved was absolute and unconditional, each containing the following waiver:

“* * * and I hereby waive presentment, demand, protest, notice of protest and notice of nonpayment.”
(T. p. 8.)

When Mrs. DuVal died on April 9, 1942, the unpaid balance on these notes was \$175,000 (T. p. 22).

5. The bank duly filed its probate claim on these absolute and unconditional guarantees with the executors in the California probate proceeding and the claim was allowed by the executors in July of 1942 (T. p. 24) and approved by the Probate Judge April 7, 1943 (T. p. 24).

6. In their first account, filed in the Probate Court, the executors reported this claim as allowed and approved (T. p. 24) and upon the settlement of the account on November 5, 1943 (T. p. 24), under Section 713 of the California Probate Code this claim, by operation of law, became an acknowledged debt of the estate, payable in due course of administration and its validity became uncontestable.

7. Since the claim was allowed and approved, under the Probate Code the decedent's estate could not be distributed without either payment of the claim *or* the bank's consent (11b *Cal. Jur.* p. 729, sec. 1247).

8. The executors and their attorney shortly prior to March 15, 1943 agreed on a plan of distribution (T. pp. 52-53) under which the estate is to be distributed to the testamentary trustee named in decedent's will *subject to the payment of the bank's claim* (T. p. 53).

9. This plan is still in force (T. p. 54) and the estate will be distributed under the plan (T. p. 54) and if the

trustee is called upon to pay the claim and the guaranteed debt is in default he will pay it (T. p. 55).

10. After the plan was adopted and on March 15, 1943, the attorney for the executors 'phoned to the bank's vice president, whom he had known for twenty years, *reminded him of the bank's claim, told him that with the claim allowed and approved the estate could not be distributed without the bank's consent, informed him of the plan to distribute the estate to the testamentary trustee subject to the bank's claim and asked if "on that basis" the bank would consent to distribution without payment of the claim* (T. pp. 51-52).

11. The vice president said he believed the bank would so consent and would let him know (T. p. 52) and under date of March 17, 1943, wrote the attorney a letter stating:

"In accordance with your request, we are enclosing a 'Consent to Distribution' in the above named estate, reserving our claim, however, against Mary J. Robinson, as a co-guarantor on the note of M. K. Blake Estate Co. There is also enclosed a Withdrawal of Request for Special Notice." (T. p. 57).

12. The facts and circumstances under which the consent was requested from and given by the bank, as stated in paragraphs 10 and 11 are disclosed by positive and uncontradicted evidence. *There is no evidence in the record to show, and no finding that, the bank intended to relinquish its claim or to waive its rights.* The undisputed evidence is the other way.

13. The *"Consent to Distribution"* which was enclosed recited that Bank of America, a creditor of the

estate, by virtue of the guarantee by decedent of the promissory notes of M. K. Blake Estate Company

“* * * hereby consents to the distribution of the above entitled estate without payment of its claim, hereby reserving, however, its claim against Mary J. Robinson who, with said decedent, guaranteed said promissory notes.” (T. p. 24.)

14. The Internal Revenue Agent disallowed the deduction of the claim for \$175,000 (T. p. 15) and review was sought in the Tax Court (T. pp. 3-12).

15. The Tax Court on February 2, 1945, promulgated its Findings of Fact and Opinion (4 T. C. No. 84) denying the petition and on February 3, 1945, entered its decision assessing a deficiency in the sum of \$48,214.31 (T. pp. 3-12).

16. The Tax Court, in its opinion, holds that “From the *tenor* of the consent to distribution, especially its reservation of the claim against the co-guarantor, *we conclude*, that as to the petitioners, the bank had *abandoned* its claim and *relinquished* its right”. (T. pp. 20-30).

17. We ask this Court to note that the Tax Court *expressly said* that it was *construing the language of the consent only*, in arriving at this conclusion and that the Tax Court completely ignored the undisputed relevant and material evidence, shown in paragraphs 8, 9, 10 and 11, *supra*, which shows what really was *intended* by the consent to distribution.

18. It is significant that the Tax Court failed to find that the bank *intended* to abandon its claim or relinquish its claim. But, it *construed* the “Consent to Distribution”

which, it concluded, abandoned the claim and relinquished the right.

19. In its opinion, the Tax Court also holds (a) that there has been no default on the notes or other event “*fixing the liability*” of the guarantor (T. p. 26), (b) that the bank’s liability was not “*enforceable*” against the estate (T. p. 27), (c) that the decedent’s liability does not attain to the dignity of a potential claim (T. p. 29) (d) that in fact there is no claim at all (T. p. 29), (e) that there was no valid or bona fide claim outstanding on the part of the bank (T. p. 28), (f) that the approval of the petitioners’ contention will lead to absurd ends (T. p. 28).

20. At the trial, petitioners sought to prove by the witness Kittrelle, qualified as an expert witness (T. p. 41-2), that the decedent’s alleged “rights over” (i.e., alleged rights of reimbursement, subrogation and contribution) had no fair market value as of the date of decedent’s death. The Tax Court declined to admit the evidence.

21. The respondent offered no witnesses at the trial (T. p. 49).

22. The other facts are found in accordance with the evidence, except as shown in Specifications of Error Nos. III, IV, V and VI.

(b) Questions involved on appeal.

The Supreme Court in *Dobson v. Commissioner*, 320 U. S. 489, 88 L. Ed. (Adv. Op.) 179, 187, 64 S. C. 239, said:

“* * * In view of the division of functions between the Tax Court and reviewing courts, *it is of course the*

*duty of the Tax Court to distinguish with clarity between what it finds as a fact and what conclusions it reaches in the law. * * **

In this case, the Tax Court made what it labelled "Findings of Fact" in which it purported to find the facts. This is followed by what is called its "Opinion" in which opinion the Tax Court's *conclusion* is as follows:

"From the *tenor* of the 'consent to distribution', especially its specific reservation of the claim against the co-guarantor, *we conclude* that as to petitioners, the bank had abandoned its claim and relinquished its right. *It follows* that the purported approval of the claim by the court was a vain and ineffective action of no legal standing or binding effect. *The consequence* is that, for Federal tax purposes, there was no valid or bona fide claim outstanding on the part of the bank and no basis for a deduction from the gross estate (T. pp. 27-28) * * *. The view we take in this case makes unnecessary consideration in detail of the several contentions advanced by the petitioners (T. p. 28). * * * In the present case, the *liability* does not attain to the dignity of a potential claim. In point of fact, there is no claim at all. * * * " (T. p. 29).

The principal questions involved on the appeal are:

(1) Did the Tax Court err in construing I. R. C. Section 812(b) (3) as precluding the deduction from the gross estate of a probate claim based on decedent's primary and direct liability on absolute and unconditional guarantees?

(2) Did the Tax Court err in construing the Consent to Distribution *from its language alone* as hav-

ing the legal effect of a *waiver* of the bank's claim and as a *relinquishment* of the bank's right, capriciously, disregarding the facts and circumstances disclosed by the uncontradicted evidence, showing why the consent was *requested* and why it was *given* and in the absence of any finding that the bank *intended* a waiver or abandonment?

(3) Did the Tax Court err in excluding evidence of the fair market value of alleged "rights over" as of the date of decedent's death?

(4) Did the Tax Court err in construing and applying the laws of California as related to the subject matter of the tax controversy?

(5) Did the Tax Court invade the province of the legislative branch of the government in holding that the petitioners' contention "would lead to absurd ends"?

(6) Did the Tax Court err in arbitrarily and capriciously disregarding relevant, material and substantial evidence in the record and in failing to make findings of fact thereon?

These questions are all indicated in the assignment of error and are fully discussed in this brief.

SPECIFICATIONS OF ERROR.

The petitioners specify the following errors:

I.

The Tax Court erred in holding that decedent's direct and primary liability on the absolute and unconditional guarantees could not form the basis for a claim deductible from decedent's gross estate under I. R. C. Section 812(b) (3).

II.

The Tax Court erred in treating decedent's primary liability on the absolute and unconditional guarantees as less than a "potential claim" and in denying deductibility of the claim on that account and because of the solvency of the maker and co-guarantor of the notes.

III.

The Tax Court erred in arbitrarily rejecting testimony offered by petitioners to prove that alleged "rights over" (i.e., alleged rights of contribution, subrogation and reimbursement) had no fair market value on the date of decedent's death.

IV.

The Tax Court erred in arbitrarily and capriciously making a partial finding of fact that conveys the erroneous idea that a plan for distributing decedent's estate has been abandoned, which partial finding is contrary to the undisputed evidence.

V.

The Tax Court erred in arbitrarily and capriciously failing to find the facts and circumstances and conditions under which the testamentary trustee requested and the bank gave its consent to distribution, which facts, circumstances and conditions are shown by the undisputed evidence.

VI.

The Tax Court erred in construing the legal effect of the consent to distribution as a waiver of the bank's claim and as a relinquishment of its rights, disregarding the facts, circumstances and conditions under which it was requested and given.

VII.

The Tax Court erred in concluding that the approval of the bank's claim by the probate judge "was a vain and ineffectual action of no legal standing or binding effect."

VIII.

The Tax Court erred in concluding, contrary to law, that the approval of petitioners' contention "would lead to absurd ends", thus invading the province of the Congress, which should act if the law is unwise or requires change.

4.

ARGUMENT.**INTRODUCTION.**

We believe time will be saved and clarity of presentation facilitated by stating, in advance of the argument upon the Specifications of Error, the principles of law governing the deductibility of probate claims under the Federal Estate Tax law and regulations and the law governing decedent's liability upon the guaranty upon which the probate claim is founded. All of these matters were presented in the briefs before the Tax Court, but were disregarded by the Tax Court which said (T. p. 28) that the view it took of the case made unnecessary the consideration of these points.

**(1) THE STATUTORY BASIS FOR THE DEDUCTION
OF THE CLAIM.**

Section 812(b) (3) of the Internal Revenue Code provides:

“For the purpose of the tax the value of the net estate shall be determined, in the case of a citizen or resident of the United States by deducting from the value of the gross estate * * *

(b) such amounts * * *

(3) for claims against the estate * * * as are allowed by the laws of the jurisdiction, whether within, or without the United States, under which the estate is being probated. * * * The deduction herein allowed in the case of claims against the estate * * * shall, when founded upon a promise or agreement, be limited to the extent that they were contracted bona

fide and for an adequate and full consideration in money or money's worth. * * *"

Section 81.36 of Regulations 105 is clear and explicit. It provides:

"The amounts which may be deducted under this heading are such only as represent *personal obligations* of the decedent, existing at the time of his death, *whether or not then matured.*"

We are here dealing with the statute *prior* to amendment on October 21, 1942.

**(2) THE DECEDENT'S GUARANTY WAS SUPPORTED
BY CONSIDERATION.**

We mention this, although the contrary is not suggested in the Tax Court's findings or opinion. The Tax Court does find that the guarantees were executed at the bank's request when the notes were executed (T. p. 21).

Section 2792 of the California Civil Code provides that when a suretyship obligation is entered into "at the same time with the original obligation" and "forms with that obligation a part of the consideration to him, *no other consideration need exist*". (Prior to its amendment, the section used the word "guaranty" instead of "surety").

The uncontradicted testimony in this case is and the Tax Court found that the bank requested Mrs. DuVal and her sister, Mrs. Robinson, to guarantee and endorse these notes (T. p. 41).

This was a clear case of a commercial guaranty in which the principal monetary consideration went to the corpo-

ration whose notes were guaranteed rather than to decedent and it is immaterial that the consideration did not flow directly to decedent or her estate: 1 *Paul on Federal Estate and Gift Taxation*, p. 602, Sec. 11.20; *Commissioner v. Porter* (CCA-2), 92 Fed. (2d) 426; *Carney v. Benz* (CCA-1), 90 Fed. (2d) 747, and *Wragg v. Commissioner* (CCA-1), 141 Fed. (2d) 638, 639.

(3) THE RIGHT TO DEDUCT A CLAIM DERIVES FROM THE STATUTE AS A MATTER OF LEGISLATIVE GRACE AND IS NOT BASED ON EQUITABLE CONSIDERATIONS OR UPON GENERAL PRINCIPLES OF LAW AND DOES NOT DEPEND UPON ANY DISCRETION VESTED IN THE COMMISSIONER.

This, we submit, is settled law. (1 *Paul on Federal Estate and Gift Taxation*, p. 573, Sec. 11.02). In *Deputy v. DuPont*, 308 U. S. 488, 84 L. Ed. 416, 60 S. Ct. 363, it is said that the allowance of deductions from gross income “does not turn on general equitable considerations. It depends upon legislative grace. * * *” In *Commissioner v. Lyne* (CCA-1), 94 Fed. (2d) 745, where the Commissioner argued that he had a “certain discretion in determining what deductions should be allowed”, the Court said that the language of the statute “seems too direct and mandatory to permit of such discretionary action on his part. * * *” And in *Porter v. Commissioner*, 288 U. S. 436, 441, 77 L. Ed. 880, 53 S. Ct. 451, in referring to the taxable “net estate” under Section 301(a) of the act involved, the Court said:

“* * * The net estate as there used does not mean an amount to be ascertained as such under any general rule of law or under statutes governing the administration of estates, but it is the gross estate as spe-

cifically defined in Sec. 302 less deductions permitted by Sec. 303 * * *’.

In *Commissioner v. Hallock* (CCA-6), 102 Fed. (2d) 1 (reversed on other grounds, 309 U. S. 106), referring to the “*simple mathematical calculation*” specified by the statute to fix the net estate, the Court said:

“ * * * The elements of both sets of factors are specifically enumerated in the Act and to some extent items going into the gross estate as well as deductions *have been arbitrarily chosen by the Congress.* * * *”

In *U. S. v. Mitchell* (CCA-7), 74 Fed. (2d) 571, 575, the Court says:

“We are unable to accept the government’s contention. *While deductions are a matter of statutory allowance, and are not determined on the basis of equity, yet it is legitimate to assume that Congress intended to provide a tax on net estates* and that, in determining net estate, deductions for debts might be made. * * *”

And in *Helvering v. O’Donnell* (CCA-2), 94 Fed. (2d) 852, 853, the Court says:

“* * * This *statute* fixes the basis for the tax * * * But the classes of property which must be included in the gross estate are specified, *however arbitrary they seem.* * * *”

(4) THE COURTS HAVE UNIFORMLY HELD THAT SEC. 812(b)(3) IS PLAIN AND UNAMBIGUOUS.

The following cases dispel any notion that there is anything ambiguous or uncertain about the meaning of

the statute. It *says* what it *means* and it *means* what it *says*: *Helvering v. Northwestern Nat. Bank* (CCA-8), 89 Fed. (2d) 553; *Commissioner v. Lyne* (CCA-1), 90 Fed. (2d) 745; *Helvering v. O'Donnell* (CCA-2) 94 Fed. (2d) 852; *Commissioner v. Hallock* (CCA-6) 102 Fed. (2d) 1; *Commissioner v. Ames* (CCA-7) 88 Fed. (2d) 338; *Commissioner v. Windrow* (CCA-5) 89 Fed. (2d) 69.

(5) THE CLAIM IS ONE THAT WAS ALLOWED BY THE LAWS OF CALIFORNIA, THE JURISDICTION WHERE PROBATE IS PENDING.

It is not even necessary that a claim be filed in order that it may be deducted from the gross estate. *Buck v. Helvering* (CCA-9) 73 Fed. (2d) 760, 764. *Commissioner v. Strauss* (CCA-7) 77 Fed. (2d) 401, 402. Nor is it necessary that a claim be allowed by the Court. (*Helvering v. Northwestern Nat. Bank* (CCA-8) 89 Fed. (2d) 553, 556.)

In *Union Guardian Trust Co.*, 32 BTA 996, 999, it is said:

“* * * The *right* to payment is what determines the question. If the claimant has a *right* to payment before the net estate subject to administration can be distributed, pursuant to the will or the laws relating to intestacy, *his claim is allowed by the law.* * * *”

Section 812(b) (3) says that a claim is deductible if allowed by the laws of the jurisdiction under which the estate is being administered. Section 707 of the California Probate Code provides that

“All claims arising upon contracts, whether they are due, not due or contingent * * * must be filed or

presented within the time limited in the notice * * * and any claim not so filed or presented is barred forever.”

It is settled law in California (11a Cal. Jur. p. 680, sec. 485), that

“Whatever signification may be attached to the term ‘*claim*’ standing by itself, in the statute relating to *presentation of claims* for payment has reference *only* to such debts or demands against decedent as might, if due, have been enforced against him in his lifetime by *personal actions for recovery of money* and upon which only a money judgment could have been rendered. * * *”

The bank’s claim on file herein is such a “claim”.

The Tax Court found (T. p. 24) that the bank’s claim in this case was duly filed and was allowed by the executors and approved by the Probate Judge.

Section 713 of the California Probate Code provides that

“Every claim allowed by the executor * * * and approved by the judge *shall be ranked among the acknowledged debts of the estate* * * *”

The Tax Court found (T. p. 24) that on October 25, 1943, the executors filed in the Probate Court their first account, reporting, among other things, the filing of this \$175,000 claim, its allowance by them and its approval by the judge.

Section 713 of the California Probate Code, quoted in part in the paragraph above, continues:

“* * * but the validity thereof may be contested by any person in interest at any time prior to the settle-

ment of the account of the executor or administrator *in which it is first reported as an allowed and approved claim.* * * *''

Thus, when the Tax Court also found that on November 5, 1943, the Probate Court settled the executors' first account reporting the allowed and approved claim, it was not only an *acknowledged debt of the estate*, but by *operation of law*, under Probate Code sec. 713, it became *incontestable* as well.

The claim meets the test prescribed by Section 812(b) (3)—*it was a claim allowed by the laws of California.*

(6) IT IS WHOLLY IMMATERIAL THAT THE CLAIM MAY OR CAN NEVER BE PAID BY DECEDENT'S ESTATE.

This is settled law under a series of decisions under Sec. 812(b) (3) *prior to its amendment* on October 21, 1942 (This decedent died in April, 1942).

In *Commissioner v. Strauss* (CCA-7) 77 Fed. (2d) 401, the claims involved were neither presented, allowed *nor paid*. The court said (page 405):

“The *statute* governs in either case. Sec. 303(a) (1) Revenue Act of 1926 (26 USCA Sec. 1095 (a) (1) *does not require* the allowance of the debt by the court *or its payment* by the estate in order that it may be deducted from the gross estate. * * *”

In *Commissioner v. Windrow*, (CCA-5), 89 Fed. (2d) 69, 71, in construing Sec. 303(a) (3) of the Act of 1926, as amended in 1932, the Court said:

“* * * We cannot, if we would amend the statute to read ‘*The value of claims against the estate*’ or

‘claims against the estate *so far as paid*’. (Emphasis by the Court). Congress did limit claims in respect of their allowance *in law*; it *did not limit them in respect of their payment or payability*.’

In *Helvering v. Northwestern Nat. Bank, etc.* (CCA-8) 89 Fed. (2d) 553, at page 556, the Court said, referring to Sec. 303(b) (3) (1926 Act as amended in 1932):

“* * * The statute clearly provides that the entire amount of claims against the estate, *whether allowed by the Court or paid by the estate or not*, must be deducted (citing cases). * * *”

In *Commissioner v. Lyne* (CCA-1) 90 Fed. (2d) 745, 746, the Court said:

“* * * It is said for the Commissioner that the expression in the statute ‘such amounts for claims against the estate as are allowed’ should be construed as meaning ‘*allowed and paid*.’ (Emphasis by the Court.) There is nothing in the statute which warrants giving the word ‘allowed’ such an uncommon meaning. * * *”

In *Helvering v. O'Donnell* (CCA-2) 94 Fed. (2d) 852, at page 853, the Court said:

“* * * Petitioner argues, however, that the deduction of claims should be limited to only those *allowed and paid*. The act, however, does not so read and we cannot assume that Congress so intended. * * *”

In *Commissioner v. Hallock* (CCA-6) 102 Fed. (2d) 1, 5, the Court said:

“* * * The fact that the estate may not be called upon to pay the debt *is no concern of the Court*. * * *”

In *Eleanor Landsburgh, Administratrix*, 35 BTA 928, 936, the Board said:

“Petitioners’ second contention is that the deductions from gross estate should include all lawful debts and funeral and administration expenses, *regardless of amount of assets in the hands of the administratrix*. This question has been definitely settled in favor of petitioners’ contention (citing cases) * * *”.

See also *Thomas DeC.Ruth, et al., Executors*, 36 BTA 191, 194, and *Edna F. Hays, et al., Executors*, 34 BTA 808, 812.

Therefore, the fact that this claim *may* never be paid or *will* never be paid is wholly immaterial, all of which is consistent with and follows from the proposition that the basis for deductibility is the *liability* of the decedent.

The Tax Court cites *Buck v. Helvering* (CCA-9) 73 Fed. (2d) 760, where this Court referred to a claim based on shareholders’ liability, *which was actually paid by the corporation during administration*, as one “*not at all likely ever to be enforced*” and referred to the claim as “potential”.

It is submitted that the settled line of decisions of the Courts is that the deductibility of a claim is not affected by the fact that it *may* not or *can* not or *will* not ever be paid. The test is the *personal obligation of the decedent at the time of her death*.

(7) IN EVALUING THE NET ESTATE FOR TAX PURPOSES THE VALUE MUST BE DETERMINED FROM DATA AVAILABLE AT THE TIME OF DECEDENT'S DEATH.

This Court in *Wells Fargo Bank & Union Trust Co. v. Commissioner* (CCA-9-Oct. 1944) 145 Fed. (2d) 132, holds that the Tax Court was in error in that case, when it permitted evidence of an actual invasion of the trust involved, to influence its decision. This Court cited *Ithaca Trust Co. v. U. S.*, 1929, 279 U. S. 151, 155, 49 S. Ct. 291 73 L. Ed. 647, where the Supreme Court said:

“The estate, as far as may be, is settled as of the date of testator’s death (citing cases). The tax is on the act of the testator and not on the receipt of property by the legatees (citing cases). *Therefore the value of the thing to be taxed must be estimated as of the time when the act is done*”.

Again, this Court quoted from *United States v. Provident Trust Co.*, 1934, 291 U. S. 272, 281, 54 S. Ct. 389, 390, 78 L. Ed. 793, that in making a *deduction* for a charitable remainder

“the value thereof must be determined from data available at the time of the death of decedent”.

This Court also referred to its opinion in *Commissioner v. Wells Fargo Bank & Union Trust Co.* (CCA-9) 145 Fed. (2d) 130.

See also *Guggenheim v. Helvering* (CCA-2) 117 Fed. (2d) 469 (Cert. Den. 314 U. S. 621, 86 L. Ed. 499, 61 S. Ct. 66) involving the valuation of certain securities, which decreased in value after decedent’s death. The Court said:

“* * * What happened later has nothing to do with the case. * * *”

citing the *Ithaca Trust Co.* case *supra*.

In this same connection, note the provisions of Sec. 81.36 of Reg. 105, which are clear and explicit:

“Claims Against The Estate: The amounts that may be deducted under this heading are such only as represent personal obligations of the decedent, *existing at the time of his death*, whether or not then matured and the interest thereon which has accrued *at the time of his death* * * *”.

The date of decedent's death is the basic date for fixing the amount of claims and *what may happen afterwards has nothing to do with the case*.

Yet the Tax Court speculates that the corporation or the co-guarantor *might* pay the claim at some indefinite time in the future.

(8) THE GUARANTY EXECUTED BY DECEDENT IN WHICH SHE WAIVED PRESENTMENT, DEMAND, PROTEST, NOTICE OF PROTEST AND NOTICE OF NON-PAYMENT WAS AN ABSOLUTE AND UNCONDITIONAL GUARANTY UNDER WHICH THE DECEDENT INCURRED A DIRECT AND PRIMARY LIABILITY.

Section 2806 of the California Civil Code provides that “a suretyship obligation is to be deemed *unconditional* unless its terms import some condition precedent to the liability of the surety.” In 1939, the Civil Code abolished the distinction between guaranty and suretyship (Civil Code, Sec. 2787). Prior to that time Sec. 2806 used the word “guaranty” instead of “suretyship”.

Because of the express waivers contained in each guaranty and because of Sec. 2806, both guarantees are *absolute* and *unconditional*. In 13 Cal. Jur. page 93, section 9, it is said that

“* * * An *absolute* guaranty is an *unqualified* undertaking that if the debtor fails of performance, the guarantor will perform; whereas a *conditional* guaranty contemplates the happening of some contingency, such as the exhaustion of remedies against the principal debtor, the exhaustion of other security, the procurement of a particular fund, immediate suit upon default by the debtor, demand and notice, or an accounting before the guarantor is liable upon the contract.”

Under these *absolute* and *unconditional* guarantees, decedent's liability was *direct* and *primary* and the creditor could enforce liability directly against decedent without prior recourse either to the deed of trust securing the guaranteed notes, or, against the principal. Thus, in 13 Cal. Jur., page 110, section 22, it is said:

“Exhaustion of Remedies Against Debtor.—The liability of the guarantor of an absolute and unconditional guaranty is fixed when the principal obligation matures and is not predicated upon the exhaustion by the creditor of his remedies against the principal debtor, or the exhaustion of other security for the debt; and it is immaterial whether the debtor can or cannot pay the debt. A guaranty is a separate and independent contract, so that if the principal obligation is secured by both a guaranty and a mortgage, *the creditor may resort to either one* or the other for his debt and the guarantor cannot force him to proceed against the security.”

There can be no doubt that liability on an *absolute* and *unconditional* guaranty is *primary*, not secondary. In *McDonald v. Gravenstein, etc. Assn.*, 42 Cal. App. (2d) 329, 108 Pac. (2d) 936, an owner signed the contract between his tenant, an apple grower and a fruit growers association *as guarantor*. He signed *as guarantor* so that this tenant could get the capital and supplies for properly carrying out his lease. The Court said:

“* * * The promise to pay is *absolute* and *unconditional*; therefore, the liability of the guarantor is fixed when the principal obligation matures and is not predicated upon the exhaustion by the creditor of his remedy against the original debtor (13 Cal. Jur. Sec. 22 p. 110.)

Applying the foregoing legal principles to the facts as established here, there was ample evidence to support the finding that appellant (guarantor) was *primarily liable for the indebtedness, notwithstanding that he did not personally receive any of the money or goods which are the basis of the account.*”

(On February 6, 1941, the Supreme Court of California denied a petition for a hearing in this case.)

Under the law of California, decedent's liability was *incurred when the guaranty was executed* and required neither default upon the notes or any other event to “fix” the guarantor's liability. Thus in 13 Cal. Jur., p. 108, sec. 21 it is said:

“Liability on a guaranty is *incurred at the date of the guaranty*, although the liability is unenforceable until the principal obligation matures. * * *”

And in *First Nat. Bank v. Consolidated Lumber Co.*, 16 Cal. App. 267, 116 Pac. 680, the Court considered the

question of when liability on a guaranty is incurred—when the guaranty is made or when it is enforced? It held that liability is incurred when the guaranty is made. At page 268, the Court said:

“It is quite true that the liability incurred by the Newport Lumber Company was not enforceable until the maturity of the note and default made by the makers thereof. *It cannot, however, be said that the liability was not created until such time. Liability does not depend for its existence upon the fact that it is immediately enforceable.* It may exist without the right of immediate enforcement. (*White v. Green*, 105 Iowa, 176 (74 N. W. 928); *Hunt v. Ward*, 99 Cal. 615 (37 Am. St. Rep. 87, 34 Pac. 335).) * * * Under the terms of the contract, the liability incurred by the Newport Lumber Company was absolute, although the right of the plaintiff to enforce such liability depended upon a contingency, namely: the default of the makers of the note; *but this fact did not render the liability contingent.* There is a marked distinction between a contingent liability and the right contingent upon the happening of an event to enforce an existing liability. In the one case, there is no liability until the happening of the event, the occurrence of which creates the liability, while in the other *the liability exists*, but the right to enforce it depends upon the contingency. Here there was an existing indebtedness in a sum specified in the note which the makers promised to pay to the holder thereof. By its contract of guaranty the corporation agreed that it would pay this indebtedness when the same was due, if the makers of the note failed to pay it. It follows, we think that the liability was created on August 31, 1905, *at the time when the corporation by contract, obligated itself to make the payment.* If this be true,

the cause of action to enforce defendant's statutory liability as a stockholder of the Newport Lumber Company was barred in three years from said date."

(The Supreme Court of California denied a petition for a hearing in this case.)

The Tax Court says that "only claims which are *enforceable* against the estate are deductible," citing *United States v. Mitchell* (CCA-7) 74 Fed. (2d) 571. In that case, the claim was based on an obligation that was *voidable*. At page 573 the Circuit Court said:

"nor can an asserted obligation which was *enforceable only at the option of the deceased obligor be deducted*. The mere fact that a contract within the statute of frauds is *voidable* and not void does not permit the executors of the estate to waive the obligor's defense after the latter's death so as to avoid an estate tax."

Since this decedent's obligation was neither "voidable" nor "void", it is obvious that a claim based thereon was clearly *enforceable* against decedent's estate.

In view of what is said in Sec. 81.36 of Reg. 105, *supra*, it is important to note that decedent had a *direct personal liability* under the guaranty, existing at the time of her death. It is *liability*, not payment, that determines deductibility.

POINTS AND AUTHORITIES.

I.

THE TAX COURT ERRED IN HOLDING THAT DECEDENT'S DIRECT AND PRIMARY LIABILITY ON THE ABSOLUTE AND UNCONDITIONAL GUARANTEES COULD NOT FORM THE BASIS FOR A CLAIM DEDUCTIBLE FROM DECEDENT'S GROSS ESTATE UNDER I.R.C. SECTION 812(b)(3).

In its opinion, the Tax Court said (T. p. 26) that "There has been no default on the notes or other event *fixing the liability of the guarantor*". This is obviously error, because as shown in (8) of the Introduction, *supra*, decedent's liability was already in existence and she had already incurred her liability under the guaranty when she signed it and the fact that it had not matured when she died is wholly immaterial under Reg. 105, Sec. 81.36, as shown in (1) of the Introduction.

The Tax Court further said (T. p. 27) that "Only claims which are *enforceable* against decedent's estate" may be deducted, citing *U. S. v. Mitchell*, 74 Fed. (2d) 571, involving a claim based on a *voidable* contract. As shown in (8) in the Introduction, the guaranty signed by decedent was valid and in no sense lacking in enforceability, and the Tax Court's conclusion is clearly erroneous.

The Tax Court further held (T. p. 29) that "In the present case the *liability* does not attain to the dignity of a potential claim. In point of fact there is no claim at all". This is error, because, as shown in (8) in the Introduction, decedent had incurred a *direct and primary liability* under the guaranty. Sec. 81.36 of Reg. 105 adopts

as the test for deductibility the *personal obligation* of the decedent and this liability she had.

Petitioners respectfully submit that the direct and primary liability of decedent under these guarantees satisfies all liability requirements of the statute.

These were commercial guarantees, there is no finding of bad faith and, as shown in (5) in the Introduction, the claim was one clearly "allowed" by the laws of the jurisdiction (California) and they were supported by consideration, as required by statute.

II.

THE TAX COURT ERRED IN TREATING DECEDENT'S PRIMARY LIABILITY ON THE ABSOLUTE AND UNCONDITIONAL GUARANTEES AS LESS THAN A "POTENTIAL" CLAIM AND IN DENYING DEDUCTIBILITY OF THE CLAIM ON THAT ACCOUNT AND BECAUSE OF THE SOLVENCY OF THE MAKER AND THE CO-GUARANTOR OF THE NOTES.

The Tax Court concluded that a claim based on a guaranty is not deductible from the decedent's gross estate because it found, as a fact, that (T. pp. 24-5) "at the date of the decedent's death and at all times since, to the date of the hearing herein, both the maker of the notes, M. K. Blake Estate Company and the co-guarantor, Mary J. Robinson, have been solvent and fully able to pay the notes in question".

The Tax Court, in its opinion, says that petitioners' position is much weaker than that present in the *Charles H. Lay*, 40 BTA 522 case, where it was said that where an estate is liable only as a *surety* or *endorser*, it cannot

take any deduction because of such liability where the principal has ample assets to pay the indebtedness.

This of course, erroneously assumes that the decedent in the present case had a *secondary* liability on her guaranty, *whereas, as above shown, her liability was direct and primary.*

The question of whether a claim based on *secondary* liability is deductible was squarely presented in *Commissioner v. Wragg* (CCA-1) 141 Fed. (2d) 638, 639, which analyzes the rationale of deductions from the gross estate based on the usual form of guarantees, etc. In this case the Commissioner argued that decedent's *secondary* liability could not form the basis for a deduction unless the value of decedent's rights over against the primary obligor were included in decedent's gross estate. The Circuit Court said (p. 640):

“The statute makes no specific mention of rights of reimbursement, contribution or indemnity, but it does provide for inclusion in the gross estates of decedents of the value at the time of death of ‘all property, real or personal, tangible or intangible, wherever situated’ (Sec. 302 of the Revenue Act of 1926, 44 Stat., Part II, p. 70, 26 U. S. C. A. Int. Rev. Acts, page 227), and these words are clearly broad enough to include such rights. The courts in the cases to be cited hereafter have at least tacitly, so construed them. *The crucial question in cases of this sort is what such a right is worth.* If it is worth one hundred cents on the dollar an estate will not be reduced by a secondary obligation of the decedent, *but if it is worth nothing, a secondary obligation will be as effective as a primary one to reduce the net value of*

an estate. It is upon this truism that the Courts and the Board of Tax Appeals appear, if inarticulately, to have proceeded in the past."

The Circuit Court then proceeded to analyze the cases and said (p. 640):

"Thus when it has appeared that the decedent's right over against the primary obligor was worth its face value, no deduction has been allowed for a secondary liability (citing cases); but when it has appeared that the right over was valueless a deduction for it has been allowed (citing cases). And, when it has appeared that the right was worth something but not its face value a deduction has been allowed to the extent of the amount which actually had to be paid and could not be recovered from the primary obligor by the estate (citing cases)."

As shown in the next subdivision of this brief, the petitioners offered evidence at the trial to prove that these rights over *had no fair market as of the date of decedent's death* and the refusal to admit this testimony was clearly error.

The *Wragg* case, we submit, is a clear analysis of the rationale for deducting a claim based upon a *secondary* liability. But in our present case, the liability on the guaranty is *primary* and *direct* and it is accordingly not necessary to resort to the reasoning of the *Wragg* case.

The error of the Tax Court is thus two-fold: (1) In excluding evidence of the value of the rights over if it felt that decedent's liability was *secondary*, and (2) in failing to consider that this decedent's liability on the guarantees, *which was a primary liability* and not a

secondary liability, formed the basis for a claim deductible from decedent's gross estate.

Furthermore, on the basis of the settled law of California, *there were no rights of contribution, subrogation or reimbursement in existence when decedent died which could be included in her estate or valued as of the date of decedent's death.* (These points the Tax Court refused to consider).

Whatever the law may be in other jurisdictions, *the law on this point is clear in California* where these guarantees were executed.

The law in California is that *no rights of contribution, reimbursement or subrogation exist unless and until the guarantor actually pays the guaranteed debt.*

When he does pay, the rights of contribution, reimbursement and subrogation which he may enforce are *based upon a new implied contract based on equitable principles and not on the original guaranty:*

REIMBURSEMENT: *No liability arises to reimburse the guarantor until the guarantor pays the guaranteed notes.* (*Wills v. Woolner* (1913) 21 Cal App. 528, 132 Pac. 283; *Baker v. Ackers* (1938) 29 Cal. App. (2d) 162, 84 Pac. (2d) 264; 13 Cal. Jur. p. 112, Sec. 30.) According to *Wills v. Woolner*, *supra*, “*regardless of authorities which may be cited from other forums*”, this principle “*must be accepted as the settled law of this state*”.

SUBROGATION: In 23 Cal. Jur., page 941, section 19, it is said:

“As a general rule, the doctrine of subrogation *requires that the person seeking its benefit must have*

*paid a debt due to a third person before he can be substituted to that person's rights; it is not a liability to pay, but an actual payment to the creditor which raises the equitable right. * * **

The doctrine of subrogation is essentially a creature of equity. In *Meyers v. Bank of America* (1938) 11 Cal. (2d) 92, 97, 77 Pac. (2d) 1084, the Court quotes from 60 C. J. page 749 (emphasis by the Court):

*"While the creditor may properly make an assignment of his rights and remedies to the surety where the surety is entitled to be subrogated, the completion of the surety's obligation and his right to pursue the rights and remedies of the creditor, is not dependent on the willingness of the latter to make an assignment, for in equity the surety's payment causes an assignment by operation of law and no formal assignment or transfer is necessary. * * **

Furthermore, the right of subrogation is only *a right to a lawsuit*. Thus in *Jack v. Wong Shee*, 33 Cal. App. (2d) 402, 92 Pac. (2d) 449, at page 411 the Court said:

" * * It is true that under the law as it exists today the right of subrogation is not one which a party may assert by his own action, but is one which may be asserted only in a civil action. (Offer v. Superior Court, 194 Cal. 114, 117; 23 Cal. Jur., 945; 25 R.C.L. 1391, sec. 794) * * *"*

CONTRIBUTION: There is no *right* of contribution in California until the guarantor has paid more than his share of the debt. The right of contribution does not even have an "inchoate" existence prior to the time that the guarantor pays more than his share. When he does pay more than his share, his action for contribution arises

and does not depend on the original contract of guaranty, but upon a new implied contract founded on principles of equity and natural justice and comes from the application of principles of equity to the condition in which the parties are found, in consequence of some of them as between themselves, having done more than their share in performing a common obligation. *Pacific Freight Lines v. Pioneer Express Co.*, (1940), 39 Cal. App. (2d) 609, 103 Pac. (2d) 1056; *Jackson v. Lacy*, (1940) 37 Cal. App. (2d) 551, 559, 100 Pac. (2d) 313; *Richter v. Henningsen* (1895) 110 Cal. 530, 537, 42 Pac. 1077.

In this connection, we may say that we are familiar with *Parrott v. Commissioner* (CCA-9, 30 Fed. (2d) 792, wherein at page 793, the Court said:

“* * * It is no answer to this to say that, since the testatrix had not paid the entire obligation in her lifetime, no liability on the part of her brother to reimburse her existed at the time of her death, which could be said to be property to be included in her gross estate. At the time of the death of the testatrix, her brother was under contractual obligation to pay his half of the debt, and to repay to her any sum that she might pay in excess of one half of the amount of their joint debt, and that obligation existed from the date of the execution of the note and the mortgage and was property. *Rice v. Southgate*, 16 Gray (82 Mass.) 142; *Griffin v. Long*, 96 Ark. 268, 131 S. W. 672, 35 L.R.A. (N.S.) 855, Ann. Cas. 1912B 622; *Norris v. Churchill*, 20 Ind. App. 668, 51 N.E. 104’”.

The point to be specially noted is that while the three cases cited, *Rice v. Southgate* (Mass.), *Griffin v. Long* (Ark.), and *Norris v. Churchill* (Ind.) do hold that the

right of *reimbursement* and contribution involved in those cases *exists from the date that the contract of suretyship or guaranty was executed*, we have just demonstrated that although this may be the law in *other* states, *it definitely is not the law of California* where, as shown in the *Pacific Freight Lines* case, *supra*, a right of contribution doesn't even have an *inchoate* existence until the guarantor pays more than his share of the debt.

Whatever the law is in Massachusetts, Arkansas and Indiana, *that is not the law in California* where these guarantees were executed and under California law, there were no rights of reimbursement, subrogation or contribution in existence on the basic valuation date, the date of decedent's death, which could be included in the gross estate.

Mrs. Robinson, the decedent's co-guarantor, was not under any *contractual* obligation to pay to Mrs. DuVal any part of the guaranteed debt *when the guaranty was signed*.

The principle that rights such as those of contribution, reimbursement and subrogation do not exist until the guarantor or endorser *actually pays* is well established by decisions of the Board of Tax Appeals: *Badenhausen*, 7 BTA 910, 912; *Howell*, 22 BTA, 140, 147.

The impropriety of including in the gross estate rights not in existence at decedent's death is well illustrated in *Skinker*, 13 BTA 846; *Rodick*, 33 BTA 1020; *U. S. v. Safety Car & Lighting Co.*, 297 U. S. 88, 56 S. Ct. 353, 80 L. Ed 500.

It is submitted that the Tax Court erred as above stated and that this is a clear cut error of law, also.

III.

THE TAX COURT ERRED IN ARBITRARILY REJECTING TESTIMONY OFFERED BY PETITIONERS TO PROVE THAT ALLEGED "RIGHTS OVER" (i.e., ALLEGED RIGHTS OF CONTRIBUTION, SUBROGATION AND REIMBURSEMENT) HAD NO FAIR MARKET VALUE ON THE DATE OF DECEDENT'S DEATH.

In Specification of Error II we have shown the importance of valuing rights over in cases where claims against estates are founded on *secondary* liability.

The petitioners here sought to prove that the rights over had no fair market value on the date of decedent's death and the offered testimony was rejected by the Tax Court.

The record shows:

R. W. Kittrelle was called as a witness on behalf of petitioners and was first examined in order to qualify him as an expert appraiser. He testified:

I am a real estate broker and appraiser, have been engaged in that business for a little over 38 years and am now the appraiser for Central Bank of Oakland and have been for the last 17 years, and for the First Federal Savings, Alameda Federal Savings, Connecticut Mutual Life Insurance Company, and quite a few others. As such an appraiser, I appraised real property, personal property, tangible personal property, intangible personal property. I have had occasion during the period above indicated to testify in court as an expert appraiser for all of the types of property indicated, have testified in the Alameda County Superior Court and Federal Court in San Francisco (T. p. 42).

I have examined the bank's claim which is Petitioners' Exhibit 2 in this case and the promissory

notes that are attached thereto and the contracts of guaranty that have been endorsed thereon and *I am familiar with the rights of the parties* (T. pp. 42-3.)

The witness was not cross-examined by counsel for the respondent who in response to a question by the Court "Have you any objection?" answered "No, I have no objection. I admit that he is a qualified appraiser of real property and * * *" (T. p. 43).

The witness was thereupon asked the following question:

"Ethel M. DuVal, who died April 9, 1942, in her lifetime, with her sister, Mary J. Robinson, endorsed and guaranteed certain promissory notes for M. K. Blake Estate Company, in favor of Bank of America, National Trust & Savings Association, for the principal balance of \$175,000 payable August 2, 1944, and interest thereon at the rate of Four and One-Half per cent ($4\frac{1}{2}\%$) per annum, which said principal balance remains unpaid and if Ethel M. DuVal's estate is required to pay the entire amount of said notes at some indeterminate time after April 9, 1942, it will, after making such payment, then be entitled to a right of contribution against Mary J. Robinson if Mary J. Robinson is then alive (or against her estate if she is then deceased and if the time for filing claims against her estate has not expired), which right of contribution would be a right to recover from Mary J. Robinson or her estate to the extent of one-half of the amount of said indebtedness paid by the Ethel M. DuVal estate. What, if anything, on the date of Ethel M. DuVal's death on April 9, 1942, was the fair market value of her estate's said right of contribution which would arise upon such payment being made by such estate at some indeterminate time after

April 9, 1942, that is to say, at what price, if any, would such right of contribution have changed hands on April 9, 1942, between a willing seller and a willing buyer thereof, neither being under any compulsion to sell or to buy?" (T. pp. 43-44).

To this question, counsel for the government interposed the following objection:

"I would like to object to that question on a couple of grounds, if your Honor please. In the first place, I submit that this witness is not qualified to answer that question because it, in turn involves a legal principle, and to which this man has shown no qualifications." (T. pp. 44-45).

"I object otherwise on the basis that this question is incompetent, irrelevant and immaterial." (T. p. 45).

Upon this objection the Court ruled "I sustain the objection." (T. p. 45).

Following this, counsel for petitioners offered to prove by the testimony of the witness on the stand that the answer to the question propounded would be that the right of contribution would have no market value (T. p. 46).

After the objection was sustained by the Court, counsel for petitioners asked the Court, "Would it be too much to ask your honor on which of the grounds the objection was sustained?" to which the Court replied, "*Let the record stand as it is.*" (T. p. 46).

Thereupon the witness was asked the following question:

"Ethel M. DuVal, who died on April 9, 1942, in her lifetime, with her sister, Mary J. Robinson, endorsed

and guaranteed certain promissory notes for M. K. Blake Estate Company, in favor of Bank of America, N. T. & S. A., in the principal balance of \$175,000 and interest thereon at the rate of four and one-half percent ($4\frac{1}{2}\%$) per annum, which said principal balance remains unpaid and, if Ethel M. DuVal's estate is required to pay the entire amount of said notes at some indeterminate time after April 9, 1942, it will, after making such payment, then be entitled to a right of subrogation, that is to say, a right by means of a civil action to have and enforce any security which said bank or the holder of said notes had at the time of such payment thereof by the estate, which said right of subrogation is not a tangible right of such a nature and character that it can be seized or held or enjoyed independently of a judicial proceeding. What, if anything, on the date of Ethel M. DuVal's death on April 9, 1942, was the fair market value of said estate's said right of subrogation which would arise upon such payment being made by said estate at some indeterminate time after April 9, 1942, that is to say, at what price, if any, would such right of subrogation have changed hands on April 9, 1942, between a willing seller and a willing buyer thereof, neither being under any compulsion to sell or to buy?" (T. pp. 47-48).

Counsel for the Government interposed the same objection (T. p. 48) and the Court sustained the objection (T. p. 48) and exception was taken by petitioners (T. p. 48) who thereupon offered to prove by the witness on the stand in answer to the question his testimony would be that such right of subrogation had no fair market value on April 9, 1942, the date of decedent's death (T. p. 48).

Thereupon the witness was asked the following question:

“Ethel M. DuVal, who died on April 9, 1942, in her lifetime, with her sister, Mary J. Robinson, endorsed and guaranteed certain promissory notes for M. K. Blake Estate Company, in favor of Bank of America, N. T. & S. A., in the principal balance of \$175,000, payable August 2, 1944, and interest thereon at the rate of four and one-half per cent ($4\frac{1}{2}\%$) per annum, which said principal balance remains unpaid and, if Ethel M. DuVal’s estate is required to pay the entire amount of said notes at some indeterminate time after April 9, 1942, it will, after making such payment, then be entitled to a right of reimbursement against the M. K. Blake Estate Company, that is to say, a right to recover from the M. K. Blake Estate Company the full amount paid on its said notes to the holder thereof. What, if anything, on the date of Ethel M. DuVal’s death on April 9, 1942, was the fair market value of said right of reimbursement which would arise upon such payment being made by said estate at some indeterminate time after April 9, 1942, that is to say, at what price, if any, would the right of reimbursement have changed hands on April 9, 1942, between a willing seller and a willing buyer thereof, neither being under any compulsion to sell or to buy?” (T. pp. 48-49).

To this question counsel for the Government made the same objection (T. p. 49), the Court sustained the objection (T. p. 49) and petitioners took an exception (T. p. 49), petitioners offering to prove by the witness on the stand that the answer to the question on which the Court had ruled would be that the right of reimbursement would have no fair market value (T. p. 49).

It is submitted, in view of the law as set forth in Specification of Error II that the Tax Court erred in rejecting this evidence.

If the Tax Court believed that *there were no rights over in existence on the date of decedent's death*, as shown in Specification II, it would have been justified in excluding the evidence. But it did not so hold and when we asked the Judge if he would state on which of the grounds he sustained the objection, his reply was "*Let the record stand as it is*".

This, we submit, is another clear cut error of law.

IV.

THE TAX COURT ERRED IN ARBITRARILY AND CAPRICIOUSLY MAKING A PARTIAL FINDING OF FACT WHICH ERRONEOUSLY CONVEYS THE IDEA THAT THE PLAN FOR DISTRIBUTING DECEDENT'S ESTATE HAS BEEN ABANDONED, WHICH PARTIAL FINDING IS CONTRARY TO THE UNDISPUTED EVIDENCE.

In its Findings of Fact, the Tax Court found:

"The decedent, by her will, created a residuary trust, naming M. W. Dobrzensky as trustee and as residuary devisee and legatee in trust. Shortly prior to March 15, 1943, a plan was agreed upon between the executors and their attorney (M. W. Dobrzensky) whereby the decedent's estate could be distributed. The plan provided that the entire estate should be distributed to the trustee subject to the payment of the bank's claim. *This plan has never been carried out.*" (T. p. 24.)

The last sentence that "This plan has never been carried out" creates the false impression that the plan was abandoned.

The undisputed evidence is as follows: *The estate has not yet been distributed, but the plan is still in existence and that is the way we will distribute the estate* (T. p .54). *If the maker of the note doesn't pay, the trustee intends to pay the notes if called upon to do so and if the notes are in default* (T. p. 55).

If the finding is intended to mean that the plan for distribution is abandoned, it is clearly contrary to the evidence and in any event creates a wrong impression and is clearly unreasonable and distorts the meaning of the undisputed evidence.

Taken in connection with what is shown in the following subdivision hereof, it is submitted that the Tax Court capriciously ignored evidence that was material, substantial and uncontradicted.

It was material, in considering the conditions under which the Consent to Distribution was *requested* and *granted*, that it be observed that the plan of distribution was in existence and will be carried out.

Otherwise, a fraud would be perpetrated upon the bank.

V.

THE TAX COURT ERRED IN ARBITRARILY AND CAPRICIOUSLY FAILING TO FIND THE FACTS AND CIRCUMSTANCES AND CONDITIONS UNDER WHICH THE ESTATE REQUESTED AND THE BANK GAVE ITS CONSENT TO DISTRIBUTION, WHICH FACTS, CIRCUMSTANCES AND CONDITIONS ARE SHOWN BY THE UNDISPUTED EVIDENCE.

In its Findings of Fact the Tax Court makes another partial finding:

“In response to a *request* by the trustee, Dobrzensky, the bank on March 17, 1943, sent to him a ‘Consent to Distribution’ providing that the bank ‘hereby consents to distribution of the above entitled estate without payment of its claim, reserving, however, its claim against Mary J. Robinson, who, with said decedent, guaranteed said note.’”

This finding of a mere request is false and contrary to the substantial and uncontradicted evidence because it capriciously ignores the facts and surrounding circumstances which show *what* was requested of the bank and *why* the request was made—facts which show the true intent of the transaction and negative any thought that the bank *intended* to “relinquish” its claim or “abandon” its right.

The Tax Court should have looked beyond the mere form of this instrument to discover its spirit and purpose. It should not have disregarded the facts and circumstances disclosed by the undisputed evidence (12 *Am. Jur.* p. 776, Sec. 242; 17 *C. J. S.* p. 744, Sec. 321).

The Tax Court, in its opinion makes it clear that it did disregard the evidence of the circumstances and conditions

under which the consent to distribution was *requested* and given because it says (T. p. 27) "From the *tenor* of the 'Consent to Distribution', *especially its specific reservation of the claim against the co-guarantor, we conclude* that as to petitioners, the bank had *abandoned* its claim and *relinquished* its right". This evidence, which the Tax Court disregarded, was material and relevant, if the Tax Court was interested, as it should have been, in knowing *if the bank intended a relinquishment or abandonment.*

The uncontradicted evidence in the record is as follows: On March 15, 1943, M. W. Dobrzensky, as attorney for the executors, telephoned to Mr. A. E. Caldwell (whom he had known for over 20 years), Vice President of Bank of America, the payee of said notes, as follows: *Reminded* him that the bank had filed its claim against the Estate of DuVal for \$175,000. *Told* him that the claim had been allowed by the executors and would shortly be presented to the court for approval and that when the claim which was allowed was approved by the court, the estate of DuVal could not be distributed without the bank's consent. *Told* him that, as he had known, under decedent's will, the entire residue of the estate was distributable in trust to M. W. Dobrzensky, as trustee and it was the executors' plan to distribute the residue of the estate to the trustee in trust under the will, subject to the bank's claim and *asked him* if the bank *on that basis* would consent to the distribution of the estate without payment of its claim (T. p. 52). A. E. Caldwell, the Vice President, advised said M. W. Dobrzensky that he *believed* the bank would so consent and would let him know (T. p. 52) and on March 17, 1943, addressed a letter to said M. W. Dobrzensky, as follows:

“*In accordance with your request*, we are enclosing a ‘Consent to Distribution’ in the above named estate, reserving our claim, however, against Mary J. Robinson, as a co-guarantor on the note of M. K. Blake Estate Co.

There is also enclosed a Withdrawal of Request for Special Notice.” (T. p. 57).

Enclosed with said letter was the “Consent to Distribution”.

It is at once clear that the trustee *never asked* the bank to waive or relinquish its claim. The trustee explained what the plan of distribution was and made it clear that the estate would be distributed *subject to the claim*. He asked if “*on that basis*” the bank would consent to distribution *subject to the claim*, but without payment thereof and the undisputed evidence is that the bank sent the consent to distribution “*in accordance with your request*”.

The request was that the consent be given so that the estate could be distributed *subject to the claim* and the consent was sent “*in accordance with your request*”. It cannot be concluded that the bank *abandoned its claim and relinquished its right*.

The finding is false in that it finds merely that there was a “request” for the Consent to Distribution because this ignores the evidence bearing on the intent of the parties.

“Abandonment” and “relinquishment” are matters of intention and to find merely that the Consent was transmitted “in response to a *request* by the trustee” and without showing what the request was, obscures the real intention of the parties.

Referring to “*relinquishment*” or “*waiver*” it is said in 25 *Cal. Jur.* p. 929, sec. 3:

“* * * it is a general rule that to constitute a waiver there must be an existing right * * * a knowledge * * * of its existence *and an actual intention to relinquish it* * * *. In no case will a waiver be presumed or implied contrary to the intention of the party whose rights would be injuriously affected. * * *”

And, referring to “*abandonment*”, it is said in 1 *Cal. Jur.* p. 10, sec. 7:

“All the cases agree upon the cardinal rule that there must be no abandonment *without an intention to relinquish possession*—that the existence of abandonment is a question of intent to be determined from *all the facts and circumstances of the case.*”

It is respectfully submitted that the Tax Court’s bare finding that the Consent to Distribution was sent “in response to a *request* by the trustee” (without finding *what* the request was) coupled with the fact that the Tax Court construed the Consent to Distribution as an “abandonment” of the claim and as a “relinquishment” of the bank’s right *from its verbiage alone* without considering the surrounding facts and circumstances under which it was requested and given and without any finding of fact that the bank *intended* a waiver or abandonment is a clear cut error of law and that the finding, as made, is capricious and arbitrary and is not supported by the *substantial* evidence in the record.

VI.

THE TAX COURT ERRED IN CONSTRUING THE "CONSENT TO DISTRIBUTION" AS A WAIVER OF THE BANK'S CLAIM AND AS A RELINQUISHMENT OF ITS RIGHT.

In the previous subdivision hereof, we have shown that the Tax Court failed to find the facts underlying the delivery of the Consent to Distribution, as shown by the undisputed evidence and, construing only the language of the Consent to Distribution, erroneously concluded that thereby the bank "abandoned" its claim and "relinquished" its right.

This Consent to Distribution is exactly what its name implies, namely, a "consent to distribution" and *does not purport to be a release* of the claim or of the debt.

In order to understand the legal effect of the Consent to Distribution and why the executors requested the consent to distribution without payment of the bank's claim, we must look at the Probate Law of California in order to see clearly that a release or waiver or relinquishment was unnecessary and was neither requested nor given. Section 713 of the California Probate Code provides that:

"Every claim allowed by the executor or administrator and approved by the judge shall be ranked among the acknowledged debts of the estate *to be paid in the course of administration* * * *".

The general rule is stated in 11b *Cal. Jur.* p. 729, sec. 1247, as follows:

"*Before there can be any distribution of the residue of the estate, the expenses of administration, debts of the deceased, and legacies prior in time must be paid,* * * *"

More specifically, the rule is stated in 11b *Cal. Jur.* p. 734, sec. 1251:

“*Distribution subject to lien or charge of debts.* Creditors are entitled to have the administration kept open until they are paid. A court cannot, over the objection of creditors or *without their consent*, arrest the course of administration, charge the assets with a lien for unpaid debts, legacies and expenses, and distribute the property, burdened only with the charge for the sums due, to be paid at the will of the distributees or when they are compelled so to do by suit to enforce the lien. *Consent*, however, *enables the Court, in its discretion, to make such a decree*, and it may be possible to make a conditional decree that the property be delivered on condition that the distributees concurrently pay the amounts due for legacies, debts and costs of administration.

When distributed property is burdened with a lien the court has power to declare that it shall be taken subject thereto, even though the lien be continuing and accruable contingently; * * *

The executors, in view of these provisions, through their counsel asked for such a consent and *assured the bank* that the estate would be distributed, under the will, without the payment of the bank's claim, but *subject to the bank's claim. That was the condition upon which the bank's consent was obtained.* As stated in 11b *Cal. Jur.* p. 767, sec. 1275:

“The heirs or devisees may *consent to a distribution in a particular manner, and the court may incorporate their contract in its decree*, either by express terms or by apt reference, provided the consideration has not in the meantime failed. Such a decree is not prejudicial to other persons, and the representative

is not injured thereby and cannot question the authority of an attorney acting for one of such parties to enter into the stipulation. The consenting parties cannot complain on appeal that the decree departs from the terms of the will."

And the decree of distribution in this estate will distribute the assets of the estate *subject* to the bank's claim.

The probate law of California makes it very clear why a consent to distribution was requested and that such a consent, in law, is not an abandonment of the claim or a waiver of the claimant's right.

In passing, it should be mentioned that the Superior Court, in which the administration of decedent's estate is now pending, will not lose jurisdiction thereof when the estate is distributed. Section 1120 of the California Probate Code provides:

"When a trust created by a will *continues after distribution*, the Superior Court *shall not lose jurisdiction of the estate by final distribution*, but shall *retain jurisdiction* for the purpose of determining to whom the property shall pass and be delivered upon final or partial termination of the trust, to the extent that such determination is not concluded by the decree of distribution, or settling the accounts and passing upon the acts of the trustee and for the other purposes hereinafter set forth. * * *"

The trust assets, which come from decedent's estate, will still be subject to the charge of the liability on the guaranty.

It is a well established practice in California, in the administration of estates where a claim is filed upon a note secured by a mortgage on estate property, of which

we think this Court will take cognizance, for a claimant to consent to distribution without payment of the claim. This does not mean that the estate is released from the debt. The very contrary is meant. *The property remains subject to the mortgage and only payment is dispensed with during the administration of the estate.* The claimant does not relinquish his right to payment. Liability continues.

Payment could be made as well *after* the distribution of the estate, as before. Furthermore, as we have shown, payment is not necessary to allowance of the claim. (Introduction (6).)

A recent decision of the Court of Claims reveals the logic and practical basis of the situation. In *Schiffman v. U. S.* (Ct. Cl. 1943), 51 Fed. Supp. 728, a debt guaranteed by decedent and four others was refinanced and *the estate released*. It was held that no part of the mortgagee's claim was deductible, since the facts showed that *neither the estate nor the beneficiary* ever unconditionally paid or *remained liable to the mortgagee for any amount on account of decedent's guarantee*. At page 732, the Court said:

“* * * There may be cases where an estate would be entitled to claim and take a deduction on account of the debt of the decedent where such debt was paid by the beneficiary rather than directly by the estate, Cf. *Stone v. White*, 301 U. S. 532, 302 U. S. 639, 57 S. Ct. 851, 81 L. Ed. 1265, 82 L. Ed. 497. We do not find this to be such a case. *In this case it is not shown that either the estate or the beneficiary ever unconditionally paid or remained liable to the Commonwealth Life Insurance Company for any amount on the decedent's guarantee on the mortgage notes of*

the Huntsville Hotel Company to the insurance company, in connection with which the deduction is claimed."

In the instant case, the estate *has not been released* and the consent to distribution without payment of the claim was given so that the estate could be distributed to the trustee, *subject to the claim*.

Here the estate and its assets *will remain liable* and there certainly is no "release".

The agreement was that the estate would be distributed to the testamentary trustee "*subject to*" the bank's claim, not that it would be distributed "*free from*" the bank's claim.

At most, the Consent to Distribution could mean that *payment* of the bank's claim was to be *postponed* until after distribution.

But we have already shown that *payment* of a claim is not a prerequisite to its deductibility. *Liability* is the basis for deductibility and liability always was and now is present.

The Tax Court erroneously attaches undue importance to the fact that the Consent to Distribution reserves the bank's claim against the co-guarantor, Mrs. Robinson.

The Tax Court says that "from the tenor of the 'consent to distribution', *especially* its specific reservation of the claim against the co-guarantor" (T. p. 27) it concluded that the bank abandoned its claim and relinquished its right.

We do not think that any *intention* by the bank to abandon its claim and relinquish its right can be tortured

out of this reservation alone in disregard of the undisputed evidence of the facts and circumstances under which the consent was *requested* by the trustee and *given* by the bank.

In particular, we think that the fact that the bank endeavored to make sure that it would not prejudice its claim against the co-guarantor, Mrs. Robinson, in consenting to distribution of the estate without payment of the claim, is not evidence of an intent by the bank to abandon its claim or relinquish its right.

It is significant that the Tax Court made no finding of fact that such was the intention of the bank and its interpretation of the written instrument, without any consideration of the undisputed underlying facts and circumstances, is a clear cut error of law.

Nor can it be perceived how a consent to the distribution of the state "*subject to*" the bank's claim turns out to mean, in the Tax Court's opinion, a distribution of the estate "*free from*" the claim.

The Tax Court's error in construing the legal effect of the "Consent to Distribution" involved a clear cut error in a determination based on law. *Lum. v. Commissioner* (CCA-3) 147 Fed. (2d) 356, 357; *Union Trust Co. v. Butler* (CCA-3) 84 Fed. (2d) 386; *Millwood Associates v. Commissioner* (CCA-2) 115 Fed. (2d) 871; *Commissioner v. Buck*, 120 Fed. (2d) 774; *McManus v. Commissioner* (CCA-6) 131 Fed. (2d) 670; *Welsback Eng. Etc., Corp. v. Commissioner* (CCA-3) 140 Fed. (2d) 584; *Brown & Sons Lumber Co. v. L. & N. R. Co.*, 299 U. S. 393, 397; 57 S. Ct. 265, 82 L. Ed. 301.

VII.

THE TAX COURT ERRED IN CONCLUDING THAT THE APPROVAL OF THE BANK'S CLAIM BY THE PROBATE JUDGE "WAS A VAIN AND INEFFECTUAL ACTION OF NO LEGAL STANDING OR BINDING EFFECT".

In its opinion, the Tax Court says that "Although the consent to distribution was in the hands of petitioners' attorney at the time, whether or not the court was advised of the action of the bank in filing such consent to distribution does not appear. *We deem this fact to be significant.*"

Later in its opinion, the Court said that "the purported approval of the claim by the Court was a vain and ineffective action of no legal standing or binding effect." (T. p. 28.)

This conclusion is erroneous because the Tax Court has wrongly concluded that the "Consent to Distribution", which the bank gave after being assured that the estate would be distributed to the testamentary trustee, *subject to the bank's claim*, under the plan of distribution that had been adopted, was a waiver by the bank of its claim and a relinquishment of its right. *Neither the trustee nor the bank thought it was a waiver or relinquishment.*

The appropriate time to inform the Probate Court of such a consent is in the *Petition for Final Distribution* of the estate, so as to justify distribution. Under the Probate Code an estate subject to claims cannot be distributed without the payment of the claim, *unless the creditor consents*. (See VI, *supra*).

There was obviously no need to tell the probate judge, when the claim was presented for *approval*, that the estate

was going to be distributed without payment of the claim under a Consent to Distribution already obtained from the creditor,

First, because neither the trustee nor the bank ever considered the consent as a waiver or abandonment;

Second, because that had nothing to do with the question of decedent's *liability*, upon which the claim was based;

Third, because the Consent to Distribution was not a waiver of the claim or a relinquishment of the bank's right;

Fourth, because under the arrangement with the bank that the estate would be distributed to the trustee *subject to the claim*, it would have been a fraud on the claimant to have sought to have the court refuse to approve the claim.

Finally, as we have shown, the decedent *was liable* on the guaranty and that *liability*, not the payment of the claim, is the legal basis for deductibility.

The Tax Court says "if, in fact, there was no claim by the bank actually *pending* when the court purported to approve the claim, then the court's action was a nullity and without legal effect."

It is obvious that the Tax Court's difficulty lay in its erroneous conception of the legal effect of the consent to distribution.

The Tax Court disregarded the undisputed evidence, as pointed out in Specifications IV and V. *It made no finding of fact that the bank intended to waive its claim and relinquish its right* because the undisputed evidence was the other way.

VIII.

THE TAX COURT ERRED IN CONCLUDING, CONTRARY TO LAW, THAT THE APPROVAL OF PETITIONERS' CONTENTION "WOULD LEAD TO ABSURD ENDS", THUS INVADING THE PROVINCE OF THE CONGRESS, WHICH SHOULD ACT IF THE LAW IS UNWISE OR REQUIRES CHANGE.

The applicable rule is very well stated in 50 Am. Jur. p. 391, sec. 380:

"Unwise Results. It is not the function of a Court in the interpretation of statutes to set forth what the act under consideration should provide, or to vindicate the wisdom of the law. The mere fact that the statute leads to unwise results, is not sufficient to justify the Court in rejecting the plain meaning of unambiguous words, or in giving to statutes a meaning of which its language is not susceptible. An omission or failure to provide for contingencies, which it may seem wise to have provided for specifically, does not justify any judicial addition to the language of the statute. To the contrary, it is the duty of the Courts to interpret a statute as they find it without reference to whether its provisions are wise or unwise, necessary or unnecessary, appropriate or inappropriate, or well or ill conceived. If a change in the law is needed, it is to be effected by the legislature and not by judicial action in the guise of interpretation. However, the wisdom of a law as interpreted under the rules of construction, may operate to bolster such interpretation. It has been declared, moreover, that the courts in construing a statute, should hesitate before ascribing a want of wisdom to the legislature in the enactment thereof."

It is to be remembered that the many cases cited above show that Section 812(b) (3) is clear and unambiguous

and means what it says and says what it means and requires no construction or interpretation. Also, that the right to deduct a claim is a matter of *legislative grace* not resting in the discretion of the Commissioner or dependent on equitable considerations or general rules of law.

The Tax Court invaded the functions of the legislative branch of the government in imputing unwise results to the effect of the law.

CONCLUSION.

Since this Court may arrive at its own conclusions from the record *as to matters of law*, it is respectfully submitted, in view of the clear cut errors of law which the Tax Court has made and which have been pointed out in this brief, that this Court should hold, *as matters of law*:

1. That the decedent's direct and primary liability on the absolute and unconditional guarantees was a proper legal basis for the allowance of a probate claim against the decedent's gross estate under Section 812(b) (3) of the Internal Revenue Code.

2. That the legal effect of the Consent to Distribution was not to work a relinquishment of the bank's claim or an abandonment of the right on which the claim was founded, because the record is devoid of any evidence, and there is no finding, that the bank ever *intended* to abandon its claim or relinquish its right.

3. That it was error for the Tax Court to exclude the petitioners' offered testimony respecting the fair market value of the alleged rights over.

4. That it was error for the Tax Court to invade the province of the Congress and to impute "unwise results" to the meaning and effect of the statute.

5. That it was error for the Tax Court to disregard the uncontradicted and substantial evidence in the record relating to the facts and circumstances under which the Consent to Distribution was requested and given, which evidence shows what the parties intended and that it was error to construe the legal effect of the Consent to Distribution from the words alone, disregarding the aforesaid material evidence and failing to find thereon.

Dated, Oakland, California,

July 9, 1945.

Respectfully submitted,

M. W. DOBRZENSKY,

JAMES H. ANGLIM,

Attorneys for Petitioners.



No. 11046

**In the United States Circuit Court of Appeals
for the Ninth Circuit**

ESTATE OF ETHEL M. DUVAL, DECEASED, BY THOMAS
M. ROBINSON, JR., AND WESTON SHATTUCK ROBIN-
SON, AS EXECUTORS OF HER LAST WILL AND TESTA-
MENT, PETITIONER

v.

COMMISSIONER OF INTERNAL REVENUE, RESPONDENT

ON PETITION FOR REVIEW OF THE DECISION OF THE TAX
COURT OF THE UNITED STATES

BRIEF FOR THE RESPONDENT

SAMUEL O. CLARK, Jr.,

Assistant Attorney General.

SEWALL KEY,

ROBERT N. ANDERSON,

LEONARD SARNER,

Special Assistants to the Attorney General.

FILED

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PAUL P. O'BRIEN,

CLERK



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*ON PETITION FOR REVIEW OF THE DECISION OF THE TAX
COURT OF THE UNITED STATES*

BRIEF FOR THE RESPONDENT

OPINION BELOW

The opinion of the Tax Court of the United States
(R. 20-29) is reported in 4 T. C. 722.

JURISDICTION

This case involves the estate tax liability of the estate
of Ethel M. DuVal, who died on April 9, 1942, Thomas M.
Robinson, Jr., and Weston Shattuck Robinson, having
been named her executors. The notice of deficiency was
mailed on February 23, 1944 (R. 12), and the petition
for redetermination was filed with the Tax Court on

May 1, 1944 (R. 1), pursuant to Section 871 (a) of the Internal Revenue Code. The decision of the Tax Court was entered on February 3, 1945. (R. 30.) Petition for review was filed on March 23, 1945. (R. 31-37.) The jurisdiction of this Court rests upon Sections 1141-1142 of the Internal Revenue Code.

QUESTIONS PRESENTED

Decedent and her sister guaranteed the payment of certain corporate notes. Both the corporate maker and the sister were solvent at the time of decedent's death and continued to remain so up to the date of the hearing before the Tax Court. May the amount of decedent's asserted liability be deducted from the value of the gross estate under Section 812 (b) (3) of the Internal Revenue Code? If so, should the value of decedent's rights over against the corporate maker and co-guarantor be included in the gross estate under Section 811 of the Internal Revenue Code?

STATUTE INVOLVED

Internal Revenue Code:

SEC 811. GROSS ESTATE.

The value of the gross estate of the decedent shall be determined by including the value at the time of his death of all property, real or personal, tangible or intangible, wherever situated, except real property situated outside of the United States—

* * * *

(26 U. S. C. 1940 ed., Sec. 811.)

SEC. 812. NET ESTATE.

For the purpose of the tax the value of the net estate shall be determined, in the case of

a citizen or resident of the United States by deduction from the value of the gross estate—

* * * *

(b) *Expenses, Losses, Indebtedness, and Taxes.*—Such amounts—

* * * *

(3) for claims against the estate,

* * * *

as are allowed by the laws of the jurisdiction, whether within or without the United States, under which the estate is being administered,
* * *. The deduction herein allowed in the case of claims against the estate, unpaid mortgages, or any indebtedness shall, when founded upon a promise or agreement, be limited to the extent that they were contracted bona fide and for an adequate and full consideration in money or money's worth.

(26 U. S. C. 1940 ed., Sec. 812.)

STATEMENT

The facts as found by the Tax Court may be summarized as follows (R. 21-25):

Ethel M. DuVal, hereinafter referred to as the decedent, died testate on April 9, 1942. (R. 21.) On August 17, 1937, the M. K. Blake Estate Company, hereinafter called the company, secured a loan from the Bank of America National Trust and Savings Association of Oakland, California, hereinafter called the bank, in the sum of \$162,000, payable three years thereafter, evidenced by the company's promissory note of the same date and secured by a deed of trust executed the same day. (R. 21.)

At the same time, and at the bank's request, the decedent and her sister, Mary J. Robinson, endorsed the note as follows (R. 22):

For value received, I hereby guarantee payment of the within obligation and all renewals or extensions thereof and I hereby waive presentment, demand, protest, notice of protest and notice of nonpayment.

(Signed) ETHEL M. DUVALL
MARY J. ROBINSON

On November 2, 1941, the company borrowed from the bank an additional \$20,000, payable August 2, 1944, giving its promissory note therefor. The second obligation was also secured by the deed of trust above referred to. The note was endorsed by the decedent and her sister in the following manner (R. 22):

For value received, I hereby guarantee payment of the within obligation and all renewals or extensions thereof and all taxes and insurance premiums and any other sums that may become due and payable under and by virtue of the provisions of the deed of trust (or mortgage) securing the aforesaid note, and I hereby waive presentment, demand, protest, notice of protest and notice of nonpayment.

I also hereby waive (a) the right, if any, to the benefit of, or to direct the application of, any security hypothecated to the holder until all indebtedness of the maker to the holder, howsoever arising, shall have been paid; (b) the right to require the holder to proceed against the maker, or to pursue any other remedy in the holder's power; and agree that the holder may proceed against the undersigned directly or independently of the maker, and

that cessation of liability of the maker for any reason other than payment, any extension, forbearance, change of rate of interest or acceptance, release or substitution of security or any impairment or suspension of the holder's remedies or rights against the maker, shall not in anywise affect the liability of the undersigned hereunder.

At the time the above notes were executed and endorsed, the decedent and her sister, Mary J. Robinson, were the owners of a majority of the company's outstanding capital stock. The decedent was president of the company and Mary J. Robinson was its secretary. (R. 23.)

On August 26, 1941, the company and the bank joined in an agreement extending the maturity date of the note for \$162,000 to August 2, 1944. The decedent and Mary J. Robinson gave their written consent to the extension. (R. 23.)

At the decedent's death the unpaid balance of the principal of the two notes amounted to \$175,000. No part of this amount has been paid since her death. (R. 23.)

After the decedent's death the bank presented its claim for \$175,000 against her estate, the claim providing that it was made "by virtue of the guaranty of said deceased of two promissory notes of M. K. Blake Estate Co., a corporation, dated August 17, 1937, and November 2, 1941, respectively." (R. 23.) The claim was delivered to the executors in June 1942 and allowed by them July 1942 for its full amount. (R. 23-24.)

The decedent, by her will, created a residuary trust, naming M. W. Dobrzensky as trustee and as residuary devisee and legatee in trust. Shortly prior to March, 15, 1943, a plan was agreed upon between the executors and their attorney (M. W. Dobrzensky) whereby the decedent's estate could be distributed. The plan provided that the entire estate should be distributed to the trustee subject to the payment of the bank's claim. This plan has never been carried out. (R. 24.)

In response to a request by the trustee, Dobrzensky, the bank, on March 17, 1943, sent to him a "Consent to Distribution" providing that the bank "hereby consents to the distribution of the above entitled estate without payment of its claim, reserving, however, its claim against Mary J. Robinson, who, with said decedent, guaranteed said promissory note." (R. 24.)

At the same time, the bank sent to the trustee a "Withdrawal of Request for Special Notice." (R. 24.)

On April 7, 1943, the claim was approved by the Judge of the Superior Court of Alameda County, California. (R. 24.)

On October 25, 1943, the executors of the decedent's will filed with the probate court their first account, in which they reported the claim for \$175,000 as an allowed and approved claim. This account was approved by order of the court on November 5, 1943. (R. 24.)

At the date of the decedent's death, and at all times since, to the date of the hearing before the Tax Court, both the maker of the notes, the M. K. Blake Estate Company and the co-guarantor, Mary J. Robinson,

have been solvent and fully able to pay the notes in question. (R. 24-25.)

At Schedule K of the estate tax return the executors of the decedent's will claimed a deduction for the \$175,000 as a debt of the decedent. The Tax Court sustained the Commissioner's determination disallowing the deduction. From this decision the executors appeal.

SUMMARY OF ARGUMENT

Approaching the problem as did the Tax Court, the claim against the estate must be considered as potential rather than actual. As such, until it is paid by the estate or is reasonably certain to be so paid, no deduction can be taken. The Tax Court did not have to accept the trustee's interpretation of the circumstances under which the Consent to Distribution was given by the bank. From the terms of the letter covering the Consent to Distribution, surely the Tax Court was justified in drawing the inference that the bank had relinquished its claim against the decedent and that "In point of fact, there is no claim at all." Obviously the right to and the amount of deductions need not be determined solely by the facts and conditions existing on the day of death. Subsequent events which serve to decrease or increase the amount the estate has to expend may be taken into consideration. The solvency of the other parties and the release of the claim by the bank demonstrate that no deduction of the amount of the decedent's asserted liability on the notes may now be taken from the value of the gross estate.

In the alternative, decedent's liability on the notes which she guaranteed may not be deducted from the

value of the gross estate unless the value of decedent's rights over against the corporate maker and co-guarantor are included in the gross estate. Although the statute makes no specific mention of the rights of reimbursement, contribution, subrogation or exoneration, it does provide for inclusion in the gross estate of the value at the time of death of "all property, real or personal, tangible or intangible, wherever situated" (Section 811) and these words are clearly broad enough to include such rights. Since the corporate maker and co-guarantor were both solvent at the time of decedent's death and continued to remain so up to the time of the hearing before the Tax Court, the Tax Court could only have reached the conclusion that decedent's rights over were worth the full amount of her asserted liability. The question relating to the value of these rights as framed to taxpayer's expert was irrelevant and properly excludible on that ground, as well as on the ground that the Tax Court was not required to adopt opinion evidence to reach the only conclusion the admitted facts would support.

Although under California nomenclature it may be said that the rights of reimbursement, contribution and subrogation do not arise until payment, decedent still possessed at her death both the right to acquire these rights and also the right of exoneration to compel the corporate maker to perform the obligations when due. In fact, the rights she possessed were actually no different from those retained by persons secondarily liable in other states, and whatever a particular state may call the rights over, the Revenue

Acts are intended to have a uniform application and to bring into the gross estate what is fundamentally the same in all states, not colored by local characterization. And the rationale of the rule that no deduction may be taken for accessory or secondary liability unless the rights over are included in the gross estate lies in the existence of a recourse against the party who is ultimately liable and not in the secondary nature of the surety's liability to the creditor conditioned upon the principal's non-performance and notice thereof.

Moreover, not every claim which may be presented and allowed by the Probate Court will be allowed as a deduction for federal estate tax purposes. Although consideration need not pass to the decedent, if the guarantor reserves no recourse against the principal in the transaction, the guaranty is in substance a gift and such a gift is not deductible under the statute. Accordingly, if we adopt taxpayers' reasoning, at the time of decedent's death a liability existed but the decedent had no recourse over since her rights had not ripened. Without recourse, the transaction was a gift and not deductible.

ARGUMENT

The amount of decedent's asserted liability may not be deducted from the value of the gross estate. But, in the alternative, if the deduction is permissible, the value of decedent's rights over against the principal debtor and co-guarantor must be included in the gross estate

This case poses the issue of the deductibility for estate tax purposes under Section 812 (b) (3) of the Internal Revenue Code of the asserted liability of

decendent on notes of the M. K. Blake Estate Company, the payment of which decendent and her sister had guaranteed. We submit that the estate clearly is not entitled to the deduction sought.

First, approaching the problem from the same direction as did the Tax Court, the claim against the estate must be considered at the very most as being merely potential¹ rather than actual. As such, until it is paid by the estate or it is reasonably certain to be so paid, no deduction can be taken. *Buck v. Helvering*, 73 F. 2d 760 (C. C. A. 9th). The Tax Court did not have to accept the trustee's interpretation of the circumstances under which the Consent to Distribution was given. (R. 51; Pet. Br. 41-44.) *Helvering v. Nat. Grocery Co.*, 304 U. S. 282. From the terms of the letter covering the Consent to Distribution (R. 57), surely the Tax Court was justified in drawing the inference that the bank had relinquished its claim against decendent. (R. 28.) *Wilmington Co. v. Helvering*, 316 U. S. 164; *Cohen v. Commissioner*, 148 F. 2d 336 (C. C. A. 2d). Had the bank not *intended* to release this claim, there would have been no need to incorporate in the letter the specific reservation of its claim against the sister, and the use of the word "however", with respect to the claim against the sister signifies that, although the sister was not released, the decendent was. Obviously the right to and amount of deduction need not be determined solely by the facts and conditions existing on the day of death, as for

¹ In its opinion the Tax Court pointed out that "In the present case the liability does not attain to the dignity of a potential claim." "In point of fact," it said "there is no claim at all." (R. 29.)

example, funeral and administration expenses which are determined thereafter. *Jacobs v. Commissioner*, 34 F. 2d 233 (C. C. A. 8th). Subsequent events which serve to increase or decrease the amount which the estate has to expend may be taken into consideration. *Buck v. Helvering, supra*. At the time of the decedent's death in the *Buck* case he was liable as a stockholder for a proportionate part of the corporation's indebtedness to a creditor. Subsequent to his death the corporation paid the creditor and, although the creditor's claim had been allowed by the Probate Court, this Court denied the deduction saying (p. 762):

In view of this peculiar and unusual liability, a liability that in the case of a solvent and going corporation is not at all likely ever to be enforced where in practical effect the stockholders' liability is rather that of surety than that of a primary debtor, although as a matter of law the liability of the stockholder is primary, we hold that the payment by the corporation of its indebtedness should be considered as satisfying the claim against the estate as of the date of the death of the deceased. If the debt of the corporation is paid by the corporation before it is paid by the stockholder, the liability of the stockholder is extinguished. For purposes of appraisement of the estate for the fixing of the federal estate tax, the stockholders' liability should be considered as a potential rather than an actual claim, until it is paid by the estate, or it is reasonably certain that it must be paid.

So also in the instant case. The solvency of the other parties and the release of the claim by the bank demonstrate that no deduction for the amount of dece-

dent's asserted liability on the notes may now be taken. Any other conclusion would lead, as the Tax Court observed (R. 28), to the absurd result that if there were a third co-guarantor who had also died, each estate could take the deduction of \$175,000 even though neither would ever pay the claim. The statement of such a situation is its own refutation.

Secondly, in the alternative, where, as here, the corporate maker and joint guarantor were both solvent at the time of decedent's death and continued to remain so up to the time of the hearing before the Tax Court, the asserted or contingent liability cannot be deducted for estate tax purposes unless the value of decedent's rights over against the principal obligor and co-guarantor are included in computing the gross estate.

It is true that the statute makes no specific mention of the rights of reimbursement, contribution, subrogation or exoneration, but it does provide for inclusion in the gross estates of decedents of the value at the time of death of "all property, real or personal, tangible or intangible, wherever situated" (Section 811) and these words are clearly broad enough to include such rights. *Commissioner v. Wragg*, 141 F. 2d 638 (C. C. A. 1st). For this Court the problem was settled as far back as 1929 by the decision in *Parrott v. Commissioner*, 30 F. 2d 792, certiorari denied, 279 U. S. 870. There decedent and her brother were jointly and severally liable for the payment of a note secured by a mortgage. Although the brother was solvent, the executors sought to deduct for federal estate tax purposes the total mortgage debt. The

Board of Tax Appeals allowed this as a deduction, but held that one-half thereof should be included in the gross estate, since the executors in paying the mortgage would have a claim for contribution which was a collectible asset of the estate. This Court affirmed saying (p. 793) :

At the time of the death of the testatrix her brother was under contractual obligation to her to pay his half of the debt, and to repay to her any sum that she might pay in excess of one-half of the amount of their joint debt, and that obligation existed from the date of the execution of the note and mortgage and was property.

As was pointed out in the *Wragg* case, *supra* (p. 640) :

The crucial question in cases of this sort is what such a right is worth. If it is worth one hundred cents on the dollar an estate will not be reduced by a secondary obligation of the decedent, but if it worth nothing, a secondary obligation will be as effective as a primary one to reduce the net value of an estate. It is upon this truism that the courts and the Board of Tax Appeals appear, if inarticulately, to have proceeded in the past.

Thus when it has appeared that the decedent's right over against the primary obligor was worth its face value, no deduction has been allowed for a secondary liability (*Estate of Lay*, 40 B. T. A. 522; *Hartford Nat. Bank & Trust Co. v. Smith*, D. C. Conn., 54 F. Supp. 579; see also *Parrott v. Commissioner*, 9 Cir., 30 F. 2d 792, certiorari denied, 279 U. S. 870, S. Ct. 512, 73 L. Ed. 1007; *Buck v. Helvering*,

9 Cir., 73 F. 2d 760); but when it has appeared that the right over was valueless a deduction for it has been allowed. *United States v. Mitchell*, 7 Cir., 74 F. 2d 571; *Commissioner v. Porter*, 92 F. 2d 426; *Carney v. Benz*, 1 Cir., 90 F. 2d 747, 113 A. L. D. 365; *Dodge v. Gagne*, D. C., 23 F. Supp. 729. And, when it has appeared that the right was worth something but not its face value a deduction has been allowed to the extent of the amount which actually had to be paid and could not be recovered from the primary obligor by the estate. *McCoy v. Rasquin*, 2 Cir., 102 F. 2d 434; *Eckhart v. Commissioner*, 33 B. T. A. 426, 440; *Estate of Borland*, 38 B. T. A. 598.

There can be no dispute that the value of decedent's rights over were worth the full amount of the contingent liability. The finding of the Tax Court that (R. 24-25) "At the date of the decedent's death, and at all times since, to the date of the hearing herein, both the maker of the notes, the M. K. Blake Estate Company, and the co-guarantor, Mary J. Robinson, have been solvent and fully able to pay the notes in question" is not contested. The Tax Court did not need expert testimony to value the rights over, nor was it required to adopt the conclusion of the expert whose opinion was ruled inadmissible. (Pet Br. 34.) *Doernbecher Manufacturing Co. v. Commissioner*, 95 F. 2d 296 (C. C. A. 9th). It could on the facts reach only one judgment. Implicit in the Tax Court's opinion is the conclusion that the rights over against the principal debtor were worth the face value of decedent's obligation. See *Commissioner v. Wragg*, *supra*.

We fail to see the significance which taxpayers attach to the proposition that decedent's liability on each note was direct and primary and not of a secondary nature. (Pet. Br. 28.) We may assume that as between decedent and the bank, decedent may have been a primary obligor in the sense her duty to pay existed irrespective of any attempt on the bank's part to secure performance when due from the corporate maker and to notify decedent of the maker's default. But surely taxpayers cannot argue that the corporate maker did not have the ultimate burden of paying the notes and that as between the corporation and decedent the corporation rather than decedent had to perform. We submit that the rationale of the rule enunciated in the *Wragg*, *Parrott*, and kindred cases lies in the existence of rights of recourse over against the party who is ultimately liable and not in the secondary nature of the surety's liability to the creditor conditioned upon the principal's non-performance and notice thereof.² The use of the word "secondary" by the Court in the *Wragg* case was by reference only to the relationship between the principal obligor and the surety, and this is evident from the facts themselves,

² See Restatement, Security, Section 82, comment f, which provides:

When the statement is made that the principal should perform or that the principal has the principal or primary duty and the surety as an accessorial or secondary duty, it does not mean that the creditor's assertion of his right against surety must be postponed until some action is taken against the principal. So far as the creditor is concerned, the surety may be the primary obligor. Where principal and surety are bound jointly, from the standpoint of the creditor, there is no secondary liability.

for the decedent was a co-maker of many of the notes which admits of no secondary liability to the creditor. And in *Parrott v. Commissioner, supra*, the testatrix was primarily and directly liable to the creditor as a joint and several obligor, yet the right of contribution or reimbursement from her brother had to be included in her gross estate.

There are two sufficient answers to taxpayers' contention that, since under California law the rights over did not arise until payment, no property existed at the time of decedent's death which could be included in decedent's gross estate. (Pet. Br. 30-33.) It should be observed that this very argument was advanced and rejected by this Court in *Parrott v. Commissioner, supra*, where it was said (p. 793):

It is no answer to this to say that, since the testatrix had not paid the entire obligation in her lifetime, no liability on the part of her brother to reimburse her existed at the time of her death, which could be said to be property to be included in her gross estate. At the time of the death of the testatrix her brother was under contractual obligation to her to pay his half of the debt, and to repay to her any sum that she might pay in excess of one-half of the amount of their joint debt, and that obligation existed from the date of the execution of the note and mortgage and was property.

It aids taxpayers in no way to attempt to becloud the problem by raising technical niceties with respect to the illusive concept of right. The rights over existing in California in favor of the person secondarily liable ripen into being upon payment of the obliga-

tion just as they do in all the other states. See *Arant on Suretyship*, Sections 73, 75, 79. It matters not whether they are considered new rights independent of the original contract or old ones springing from inchoate rights lying dormant. Compare *Pacific Freight Lines v. Pioneer Exp. Co.*, 39 Cal. App. 2d 609 with *Arp v. Blake*, 63 Cal. App. 362. Whatever a particular state may call the rights over, the Revenue Acts are intended to have a uniform application and to bring into the gross estate what is fundamentally the same in all states, not colored by local characterization. *Lyeth v. Hoey*, 305 U. S. 188. Whether California calls the rights over a right of subrogation or a right of contribution, or a right to a right of subrogation or contribution, decedent still had at her death property rights of value. In California as in most states a volunteer acquires no right of subrogation. *Brown v. Rouse*, 125 Cal. 645. Decedent would have been no volunteer had she paid the obligation, and to cast the problem in taxpayers' terms, the right upon payment to acquire the right of subrogation may be said to be the property right which must be included in the gross estate. Its value to any one individual cannot be, as taxpayers attempted to adduce from their expert, contingent upon payment being made by the same individual. (R. 43-49.) Obviously, even in a state where the rights over exist from the moment the contract is executed, no one would buy the right of subrogation if he as the purchaser thereafter had to pay the obligation. The expert should have been asked what he would value the rights over if, regardless of those rights, he was already under an unconditional

obligation to pay the notes. The question as framed to the expert was therefore irrelevant and properly excludible on that ground (compare *Buck v. Commissioner*, 83 F. 2d 786 (C. C. A. 9th)) as well as on the ground that no opinion evidence was necessary to aid the Tax Court in reaching the only conclusion the admitted facts would support. In this connection it should be observed that under the California Inheritance Tax Act the California Supreme Court in a case involving the same estate reached the same conclusion as did this Court in the very *Parrott* case which taxpayers claim was decided contrary to California law. The executors attempted to secure the full deduction of the mortgaged debt for purposes of the local tax and the Court in denying the deduction said (*Estate of Parrott*, 199 Cal. 107, 112):

The Inheritance Tax Act (Stats. 1913, p. 1066) is quite convincing to the point that a debt of which the act takes notice is one which has actual existence, and does not attempt to artificially create a debt where in fact none exists. * * * It is true that only property which exists at the time of the decedent's death is subject to the tax and the right of the state to the tax accrues at the time of death, but this does not mean that the tax may not be thereafter determined, and when so determined it relates back to the time of death. No question of after accrued or acquired property is presented by this case, the question here being the amount of the allowance that should be made as a debt reduction.

Moreover, under taxpayers' own analysis a very valuable right existed at date of death which must be included in the gross estate—the right of exoneration expressed in Section 2846 of the California Civil Code (Deering), that a surety can compel the principal to perform the obligation when due. *Los Angeles Etc. Co. v. Coast Const. Co.*, 185 Cal. 586; *Kreling v. Kreling*, 118 Cal. 413; see also *Magee v. McManus*, 70 Cal. 553; *Josephran v. Lion*, 66 Cal. App. 650. The California courts have often repeated that it is difficult to differentiate between a surety and a guarantor. *Treweek v. Howard*, 105 Cal. 434; *Ingalls v. Bell*, 43 Cal. App. 2d 356. The ultimate purpose of both is to secure to a party the performance of some act or obligation which another party has agreed to perform. *Mahana v. Alexander*, 88 Cal. App. 111. Since the distinction between the two was abolished in 1939 (Cal. Civil Code (Deering), Sec. 2787), the \$20,000 note executed in 1941 obviously carries with it the right of exoneration expressed in Section 2846. And although the abolition does not affect obligations incurred prior to 1939 (*Ingalls v. Bell, supra*), it is also clear that the section would apply to the first note. The fundamental distinction made by the California courts between a surety and a guarantor is that the surety is usually bound on the same instrument executed at the same time and on the same consideration. *Ingalls v. Bell, supr*; *Mahana v. Alexander, supra*. In the instant case there was but one instrument and one consideration, executed at the same time. As was said in *Eastin v. Roberts, Carpenter & Co.*, 19 Cal. App. 2d 567, 571:

It is an established doctrine that after an obligation becomes payable the surety, before he has paid it and whether he has been sued by a creditor or not, may maintain an action against the debtor to compel him to pay the debt or perform the obligation, the creditor being made a codefendant, provided the creditor can himself enforce performance and neglects or refuses to do so. * * *

There is likewise a second complete answer to taxpayers' position that the rights over did not exist at decedent's death. Not every claim which may be presented and allowed by the Probate Court will be allowed as a deduction for federal estate tax purposes. *United States v. Mitchell*, 74 F. 2d 571 (C. C. A. 7th); *First-Mechanics Nat. Bank v. Commissioner*, 117 F. 2d 127 (C. C. A. 3d). Although consideration need not pass to the decedent (*United States v. Mitchell, supra*; *Commissioner v. Wragg, supra*; *Carney v. Benz*, 90 F. 2d 747 (C. C. A. 1st)) if the guarantor

³ The foregoing analysis accepts, *arguendo*, taxpayers' contention that the other rights over have no existence whatsoever until payment is made. That the California courts have enunciated no such strict doctrine is evident from *County of San Diego v. Croghan*, 2 Cal. App. 2d 494, in which it was said (pp. 499-500):

In addition to the doctrine of the subrogation of a surety on the payment of the debt of the principal which we have already set forth, it seems to be settled by good authority that the right of subrogation goes back to the date of the contract of suretyship and takes priority over a prior assignment. * * *

See also *Arp. v. Blake, supra*.

reserves no recourse against the principal in the transaction, the guaranty is in substance a gift and such a gift is not deductible under the statute. (*Commissioner v. Porter*, 92 F. 2d 426 (C. C. A. 2d); *Porter v. Commissioner*, 60 F. 2d 673 (C. C. A. 2d)). In the latter case the court said (p. 675):

But the section was certainly not intended to include all contracts supported by a consideration; so much is clear. We need not limit it to cases where the consideration passes to the testator; for example, a promise to pay for goods delivered to another might fall within it, if the testator has recourse over. But if he has not, the transaction is in substance a gift and must stand or fall with section 303 (a) (3). * * *

Accordingly, if we adopt taxpayers' reasoning, at the time of decedent's death a liability existed but decedent had no recourse over since her rights had not ripened. Without recourse the transaction was a gift and not deductible under Section 812 (b) (3).

Thus, under either analysis of the alternative ground the decision of the Tax Court must be affirmed. The estate at the time of decedent's death did possess valuable rights and, regardless of California nomenclature, these must be included in the decedent's gross estate. Or if no such rights were then owned, the deduction must be disallowed as a claim not contracted for an adequate and full consideration in money or money's worth.

CONCLUSION

The decision of the Tax Court is correct and should be affirmed.

Respectfully submitted,

SAMUEL O. CLARK, Jr.,
Assistant Attorney General.

SEWALL KEY,
ROBERT N. ANDERSON,
LEONARD SARNER,
Special Assistants to the Attorney General.

JULY, 1945.

No. 11,046

IN THE

United States Circuit Court of Appeals
For the Ninth Circuit

ESTATE OF ETHEL M. DUVAL, deceased, by
THOMAS M. ROBINSON, JR., and WESTON
SHATTUCK ROBINSON, as executors of her
last will and testament,

Petitioners,

VS.

COMMISSIONER OF INTERNAL REVENUE,

Respondent.

**Upon Petition to Review a Decision of the Tax Court
of the United States.**

PETITIONERS' CLOSING BRIEF.

M. W. DOBRZENSKY,
JAMES H. ANGLIM,
Central Bank Building, Oakland 12, California,
Attorneys for Petitioners.

FILED

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Respondent.

Upon Petition to Review a Decision of the Tax Court
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PETITIONERS' CLOSING BRIEF.

INTRODUCTORY STATEMENT.

Petitioners' opening brief challenged the decision of
the Tax Court here under review.

We here present our comments on the points raised in
respondent's brief.

(NOTE) : All emphasis here is our own, unless otherwise stated.

THE ARGUMENT OF THE REPLY.

I.

THE CLAIM BASED ON THE GUARANTEES IS REAL AND ACTUAL AND NOT POTENTIAL BECAUSE THE LIABILITY IS ACTUAL.

Respondent's statement (Resp. Br. p. 10) that the claim is potential ignores *Reg. 105*, Sec. 81.36 which establishes the proposition that so far as liability is concerned, the basis for deductibility is the "*personal obligation* of the decedent existing at the time of his death, whether or not then matured."

The claim in this case satisfied the requirements of the California Probate Code because it was a debt or demand against decedent which could have been enforced against her in her lifetime by a personal action for the recovery of money upon which only a money judgment could have been rendered (11a *Cal. Jur.* p. 680, Sec. 485).

The claim under the California Probate Code was also an acknowledged debt of the estate and allowed by the laws of California within the meaning of Sec. 812(b)(3).

II.

THE FACT THAT THE CLAIM MIGHT NEVER BE PAID DID NOT MAKE IT "POTENTIAL" AND NON-DEDUCTIBLE BECAUSE LIABILITY AND NOT PAYMENT IS THE BASIS FOR DEDUCTIBILITY.

After having said at page 10 of the respondent's brief that the claim was "potential" and not actual, it is next said that "As such, *until it is paid* by the estate or it is *reasonably certain to be paid*, no deduction can be taken."

But, as we have shown at pages 17 to 19 of our opening brief, it is settled law under a long series of decisions, cited therein, under Sec. 812(b)(3) as it existed as of the date of decedent's death, that it is wholly immaterial that the claim may never be paid. The act does not so read and Congress did not so intend. Congress did not limit deductibility of claims in respect of their payment or payability.

We respectfully submit that these cases completely dispose of the argument that *payment or payability* of the claim has anything to do with deductibility.

Deductibility depends on *liability* to pay.

III.

THE TAX COURT ERRED IN ITS CONSTRUCTION OF A WRITTEN INSTRUMENT, FROM ITS LANGUAGE ALONE AND DISREGARDED THE UNCONTRADICTED EVIDENCE SHOWING WHAT THE PARTIES INTENDED BY THE INSTRUMENT AND THIS COURT IS NOT BOUND BY THE TAX COURT'S CONSTRUCTION AND MAY MAKE ITS OWN CONSTRUCTION THEREOF.

The actual decision of this case by the Tax Court shows that the Court was *construing the legal effect of a written instrument*—the consent to distribution, *from its language alone* and without any consideration of the uncontradicted evidence of the surrounding circumstances showing what was *intended* by that instrument. Thus the Tax Court ruled:

“From the *tenor of the ‘consent to distribution’* especially its specific reservation of the claim against the co-guarantor, we conclude that as to petitioners,

*the bank had abandoned its claim and relinquished its right * * **” (T. 27-28).

The respondent's brief (p. 10) says:

“From the terms of the *letter* covering the consent to distribution (R. 57) surely the Tax Court was justified in drawing the conclusion that the bank had relinquished its claim against decedent (R. 28) * * *

The letter of transmittal (T. 58) says:

“*In accordance with your request* we are enclosing consent to distribution in the above named estate
* * *

Since this consent was sent “*in accordance with your request*” and since the uncontradicted evidence is that the consent was *requested* so that the estate could be distributed *subject to the claim*, on what rational basis can it conceivably be concluded that the bank intended to *abandon* the claim and *relinquish* its right?

The evidence on this point is (T. 52-53):

“* * * I told him (i. e. the bank's Vice President) that the claim had been allowed by the Executors and would shortly be presented to the court for approval and that when it was allowed and approved the estate could not be distributed without the consent of the bank. I told him, as he had known, I was the residuary legatee named in Mrs. DuVal's will to whom the estate would be distributed in trust and *that our plan was to distribute the estate in trust subject to the bank's claim. I asked him if, on that basis, the bank would consent to distribution.*

He said that he believed it would and would let me know in the next day or two.

On the 17th of March, on the day following, I received the letter counsel showed me, enclosing the consent to distribution and the withdrawal of special notice.”

This uncontradicted evidence plainly shows that the consent to distribution was sent in response to a request based upon the proposition that the estate would be distributed *subject to the claim* and the conclusion, *based on the language of the consent alone*, that the bank abandoned its claim and relinquished its right simply lacks the support of the record.

Furthermore, the undisputed evidence is that on August 17, 1937, the M. K. Blake Estate Co. borrowed \$162,000 from the bank (Resp. Br. p. 3); at that time and at the bank's request the guarantees were executed (Resp. Br. p. 4); on November 2, 1941, the Company borrowed another \$20,000 from the bank and guarantees were again executed (Resp. Br. p. 4); both notes were guaranteed by decedent at the bank's request (T. p. 41); on August 20, 1941, decedent and her sister gave written consents to an agreement extending the maturity of the notes to August 2, 1944 (Resp. Br. p. 5); after decedent's death the bank presented its claim on the guarantees (Resp. Br. p. 5); the claim was delivered to the executors in June, 1942 (Resp. Br. p. 5); the letter from the bank transmitting the consent to distribution is dated March 17, 1943 (T. p. 57).

It is unthinkable that the claimant bank after having husbanded the decedent's liability on the guaranty from 1937 to March of 1943 should *voluntarily* abandon its claim and relinquish its right after having been requested

to consent to distribution of decedent's estate *subject to the claim*, but without payment thereof.

The Tax Court was not justified in interpreting the consent to distribution or the letter of transmittal as an abandonment or waiver.

Abandonment and waiver are matters of *intention* and there is no finding of fact by the Tax Court that any such abandonment or waiver was *intended*.

The Tax Court here has disregarded the uncontradicted evidence which shows what the parties intended and the Tax Court's error in *construing the legal effect* of the consent to distribution from its language alone is a clear cut error of law.

In *Lum v. Commissioner* (CCA-3) 147 F. (2d) 357, at page 358, the Court said, referring to the legal effect of certain assignments of lease:

“This, * * * is not a question of fact, *but an interpretation of a written document, which the Court is free to construe for itself.*”

We respectfully submit that the Tax Court's interpretation of the consent to distribution, in the light of the facts and the law of California, as set forth in our opening brief and herein is without warrant of law and unsupported by the record.

IV.

ALL THAT BUCK v. HELVERING HELD WAS THAT "IF THE DEBT OF THE CORPORATION IS PAID BY THE CORPORATION BEFORE IT IS PAID BY THE STOCKHOLDER, THE LIABILITY OF THE STOCKHOLDER IS EXTINGUISHED".

Respondent's brief (p. 11) quotes from *Buck v. Helvering* (CCA-9) 73 Fed. (2d) 760, overlooking, apparently, that that case *decides* no more than that where the corporation *paid* its debt, before it was *paid* by the stockholder, the liability of the stockholder was extinguished as of the date of decedent's death.

In our present case, the debt for which Mrs. DuVal was liable *has not been paid* by the Corporation and it is, as it was when she died, still an active liability.

Finally, we submit that if the *Buck* case held that a claim is potential "until it is *paid* by the estate, or is reasonably certain that it must be *paid*," it is contrary to the statute and the weight of authority construing its meaning, because deductibility has nothing to do with payment or payability, as we have shown at pages 17-19 of our opening brief.

Buck v. Helvering, supra, held (73 Fed. (2d) p. 762):

"* * * we hold that the *payment* by the corporation of its indebtedness should be considered as satisfying the claim against the estate as of the date of the death of the deceased. * * *"

But, suppose, in that case, as in the case at bar, *the claim had not been paid by the principal debtor?*

That is what was *not decided* by *Buck v. Helvering*, and that is why we say that that case is not controlling here.

It may very well be that where a claim, presented against an estate, is paid during administration by the principal debtor, it is satisfied to the extent of payment, as of the date of death. But where it is not so paid and *liability remains*, the same result does not follow.

V.

RESPONDENT QUOTES FROM THE PARROTT CASE, IGNORING THE FACT THAT IT STATES A RULE WHOLLY UNSUPPORTED BY THE LAW OF CALIFORNIA WITH REFERENCE TO THE GUARANTOR'S ALLEGED OBLIGATION TO A CO-GUARANTOR.

At page 32 of our opening brief, we quoted from *Parrott v. Commissioner* (CCA-9) 30 Fed. (2d) 792.

At page 16 of respondent's brief, will be found the identical quotation, minus the citation of the three cases from Massachusetts, Arkansas and Indiana upon which the Court relied to support its conclusion that in that case decedent's brother had a "contractual obligation" to pay his half of the debt.

At pages 32-33 of our opening brief we analyzed these three cases pointing out that whereas these cases correctly state the law of Massachusetts, Arkansas and Indiana that rights over exist from the time when a guaranty is executed, but this is *not the law in California*, where the law is settled that *unless and until the guarantor actu-*

ally pays the debt, no rights over exist. (See our Opening Brief, pp. 30-32.)

Whatever the law in other jurisdictions, since 1878 Section 1432 of the California Civil Code has provided:

“A party to a joint, or joint and several obligation, *who satisfies more than his share of the claim against all, may require a proportionate contribution from all the parties joined with him.*”

If there is a “right over” which must be included in decedent’s gross estate as an asset, *it can hardly be included if it was not in existence as of the date of decedent’s death.* *Skinker*, 13 BTA 846, *Rodiek*, 33 BTA 1020, *U. S. v. Safety Car & Lighting Co.*, 297 U. S. 88.

No requirement for the uniform application of federal tax laws can justify the inclusion in this decedent’s gross estate of assets which did not exist as such in California as of the date of decedent’s death.

We admit that all *assets* of the decedent must be included in the gross estate under I.R.C. Sec. 811.

But here we must look to the law of California to see if those assets exist.

As stated in *Rabkin & Johnson on Federal Income, Gift and Estate Taxation*, p. 3942 (p. 1, Sec. 12):

“* * * Where the tax statute expressly or impliedly prescribes the taxpayer’s property right as the test of taxability, then the *existence of that right must be discovered under the controlling local law.* *Blair v. Commr.*, 300 U. S. 5; *Helvering v. Stuart*, 317 U. S. 154, see *Magruder v. Supplee*, 316 U. S. 394; *Commr. v. Park*, 113 F(2d) 352 * * *”

At page 18 of respondent's brief appears a quotation from *Estate of Parrott*, 199 Cal. 107, 112. But the quotation omits this language of the case:

“The fact that the note, as between the payors and the payee, possessed the potentialities of an enforceable demand against either of the debtors, affected his or her estate *only in the proportion that he or she was* required to pay it. The amount that the estate *was required to pay* on said obligation was the amount of the estate's indebtedness. *No greater demand than was paid by the estate was enforceable against it.* * * *”

The italicized portions of this statement are very significant in view of the facts stated by the Court, viz.—that on January 9, 1925, pending settlement of the estate, the decedent's brother *paid his one-half of the debt* and on March 10, 1925, the heirs and successors in interest of decedent paid \$130,932.75 of the balance due on the debt and agreed to pay the balance to the noteholder and indemnify decedent's brother from any liability thereon.

The *Parrott* case can mean no more than the *Buck* case, viz.—that *payment* of a claim, during administration, by a principal debtor, satisfies the claim to the extent of payment as of the date of death. But, in the case at bar, there was no extinguishing payment. While under *Reg. 105*, Sec. 81.36, all claims against the estate are determined as of the date of decedent's death, the *actual amount* of the claim may not be known until some time afterwards. Thus a claim may be *filed* for a given amount and *allowed* and *approved* for another and lesser

sum. In the *Buck* and *Parrott* cases the Courts held that the *payments* made during the period of administration by a principal debtor and by a joint obligor respectively, had the effect of *reducing the indebtedness* as of the date of decedent's death by the amount paid. But where, as in the case at bar, there has been no such payment, there is no justification for the conclusion that the claim was "potential". We respectfully submit that the statements in the two cases *beyond what was actually decided therein* is dicta and where the indebtedness existing at the time of decedent's death is *not actually reduced by payment*, the two cases are not controlling.

VI.

THERE WAS NO RIGHT OF "EXONERATION" EXISTING IN DECEDENT'S FAVOR ON THE DATE OF HER DEATH OR AT ALL WHICH IS INCLUDIBLE IN HER GROSS ESTATE.

There was no right of exoneration existing in decedent's favor under Sec. 2846 of the California Civil Code.

This case involves absolute and unconditional guarantees.

In *McDonald v. Gravenstein, etc., Assn.*, 42 Cal. App. (2d) 329, 108 Pac. (2d) 936 (cited at page 23 of our opening brief), the Court said:

"* * * The promise to pay is *absolute and unconditional*; therefore the liability of the guarantor is fixed when the principal obligation matures and it is *not predicated upon the exhaustion by the creditor of his remedy against the original debtor* (13 Cal. Jur. Sec. 22, p. 110). * * *"

In *Everts v. Matteson* (1942) 21 Cal. (2d) 437, at 445 the Supreme Court of California said:

“As to contracts of guaranty made *prior* to the abolishment of the distinction between sureties and guarantors (Stats. 1939, ch. 453, sec. 10), the courts of this state have many times declared that the obligation of the principal debtor and that of the guarantor are entirely independent obligations. (*Bank of America v. Hunter*, 8 Cal. (2d) 592, 598 (67 P. (2d) 99); *Loeb v. Christie*, 6 Cal. (2d) 416, 420 (57 P. (2d) 1303); *Cooke v. Mesmer*, 164 Cal. 332, 340 (128 P. 917); *Adams v. Wallace*, 119 Cal. 67, 70, 71 (51 P. 14); *Ingalls v. Bell*, 43 Cal. App. (2d) 356, 366, 367 (110 P. (2d) 1068); *Rice Securities Co. v. Daggs*, 63 Cal. App. 273, 275 (218 P. 484); *Imperial Water Co. No. 4 v. Meserve*, 62 Cal. App. 603, 610 (217 P. 548); *Kelley v. Goldschmidt*, 47 Cal. App. 38, 42 (190 P. 55); *Withers v. Bousfield*, 42 Cal. App. 304, 319 (183 P. 855).) ‘A mortgage or a trust deed given to secure the performance of an obligation to pay money and a guaranty given for the same purpose are each intended, of course, to subserve the same purpose, and where both are given to secure one single obligation of that character, the one operates merely as additional security to the other. *But the creditor may resort either to the one or the other to enforce the payment of the money to secure the payment of which both were given.*’ (*Kelley v. Goldschmidt*, *supra*.) As a consequence of this distinction, the courts have held that the creditor may proceed against the guarantor upon the contract of guaranty without first resorting to the trust deed or mortgage security. (*Loeb v. Christie*, *supra*; *San Francisco etc. Seminary v. Monterey etc. Co.*, 179 Cal. 166, 172 (175 P. 693); *Cooke v. Mesmer*, *supra*; *Adams v. Wallace*, *supra*; *Ingalls v. Bell*, *supra*; *McDonald v. Gravenstein*

Apple Growers Cooperative Assn., 42 Cal. App. (2d) 329, 332, 333 (108 P. (2d) 936); *California Bank v. Kenoyer*, 2 Cal. App. (2d) 367, 369 (37 P. (2d) 836); *Kelley v. Goldschmidt*, supra; *Murphy v. Hellman, etc. Co.*, 43 Cal. App. 579, 586 (185 P. 485); *Withers v. Bousfield*, supra. *A surety, however, could require the creditor to first resort to the trust deed or mortgage security.* (Civ. Code, secs. 2845, 2850; and see cases collected in 23 Cal Jur., Suretyship, secs. 5, 56, 57).)’’

The \$162,000 note guaranteed by decedent and the guaranty thereon is dated August 17, 1937 which was before the abolishment of the distinction between sureties and guarantors in 1939.

Furthermore, the guaranty of the 1941 note provides expressly (Tr. pp. 8-9)

“I also hereby waive * * * (b) the right to require the holder to proceed against the maker, or to pursue any other remedy in the holder’s power. * * *’’

VII.

RESPONDENT IS UNABLE TO JUSTIFY THE TAX COURT’S EXCLUSION OF THE TAXPAYER’S OFFERED EVIDENCE AS TO THE FAIR MARKET VALUE OF THE ALLEGED RIGHTS OVER.

We are told (Resp. Br. p. 14) that there can be no dispute that the value of decedent’s rights over were “worth” the full amount of the contingent liability.

Their position apparently is that the finding that at the date of decedent’s death and since, both the maker of the notes and the co-guarantor have been solvent is a

finding that the rights over have a "fair market value" equal to the obligation.

But, this ignores the requirement that assets are included in the gross estate on the basis of "fair market value" and "market" connotes the idea of a value based on a *sale* in the market. *Reg. 105*, Sec. 81.0(a) so provides and states that

"* * * The fair market value is the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell. * * *"

This necessarily means: If the guarantor had paid the debt, or more than her share of it, *at what price could she, under the formula, sell her rights over?*

It should be noted that her right of subrogation is a *right to a law suit* (*Jack v. Wong Shee*, 33 Cal. App. (2d) 402, 92 Pac. (2d) 499). And at page 20 of respondent's brief, respondent quotes from *Eastin v. Roberts, Carpenter & Co.*, 19 Cal. App. (2d) 567 which tells us that a right of exoneration gives the guarantor *a right to sue* the principal debtor.

Any one who purchased rights over would necessarily discount them heavily, *if such rights existed*, for there is relatively little value to a law suit. (See *Champlin v. Commr.* (CCA-10) 71 F. (2d) 23.)

Respondent evidently sees the difficulty of evaluating non-existent rights. At page 17 of respondent's brief it is said that the witness Kittrelle should have been asked this question:

“* * * The expert should have been asked what he would value the rights over if, regardless of these rights, he was already under an unconditional obligation to pay the notes. * * *”

This confused statement, we submit, shows a failure to understand what could be offered for sale in California. Under California law, there would be no rights over to sell unless the guarantor first paid the debt.

Respondent says (Resp. Br. p. 14) that the Tax Court did not need expert testimony to value the rights over, citing *Doernbrecher v. Commissioner* (CCA-9) 95 Fed. (2d) 296. All that case holds is that the Board is not bound by expert testimony.

We claim that we were entitled to be heard on this question of fair market value unless the Court held that the rights over were not in existence.

We grant that once the Tax Court ruled on fair market value after hearing the evidence, the determination would bind us. But, the Tax Court never made a finding on that subject.

VIII.

IT IS NOT THE LAW THAT “SUBSEQUENT EVENTS WHICH SERVE TO DECREASE OR INCREASE THE AMOUNT THE ESTATE HAS TO EXPEND MAY BE TAKEN INTO CONSIDERATION”.

What respondent means by the above statement which appears at page 10 of his brief evidently is that in two cases cited, the *Buck* case and the *Parrott* case, the *payment* of the claim by the principal debtor during the

period of administration in whole or in part extinguished the claim to the extent of payment, as of the date of decedent's death.

In the case at bar there was no such payment.

At pages 20-21 of our opening brief will be found a citation of the cases which settle the proposition that decedent's estate is settled as of the date of his death and what happens later has nothing to do with the case.

IX.

UNDER THE RATIONALE OF THE WRAGG CASE THE CLAIM IS ALLOWABLE IN FULL.

Wragg v. Commissioner (CCA-1) 141 Fed. (2d) 638, says:

“* * * but when it has appeared that the right over was valueless a deduction for it (i.e. the claim) *has been allowed* * * *”.

The rationale of this case is simply this: the claim may be deducted *to the extent that the rights over lack fair market value*. When the rights over are valueless, the claim is deductible in full.

Surely, the non-existent rights over which attached to these guarantees as of the date of decedent's death were valueless and justify a full deduction of the claim.

Respondent at page 9 of his opening brief mistakes the rule of the *Wragg* case, referring to

“* * * the rationale of the rule that no deduction can be taken for secondary or accessory liability unless the rights over are included in the gross estate.
* * *”

That, we submit, is *not* the rule of the *Wragg* case. *To the extent that the rights over have value* they must be included in the gross estate. If they have no fair market value, presumably they would be included at a value of "nil".

We are not trying to becloud the issues by raising technical niceties, as respondent suggests.

We *are* insisting that a realistic rather than a theoretical view be taken of this matter of "rights over" under the California law.

X.

IF THE CONGRESS IN ENACTING SEC. 812(b)(3) FAILED TO PROVIDE FOR SUCH AN UNUSUAL CASE AS THIS, THERE IS STILL NO JUSTIFICATION FOR JUDICIAL LEGISLATION.

Respondent suggests that if there were a third co-guarantor who died, each could claim a deduction without having paid the debt. This, it is claimed, would be an absurd result.

It may very well be that Congress did not think of the situation which has arisen in this case. As stated in 50 *Am. Jur.* p. 391, Sec. 380:

“* * * An omission or failure to provide for contingencies which it may seem wise to have provided for specifically, does not justify any judicial addition to the language of the statute. To the contrary, it is the duty of the courts to interpret a statute as they find it without reference to whether its provisions are wise or unwise, necessary or unnecessary, appropriate or inappropriate, or well or ill conceived * * * .”

If there *is* anything absurd about this case, it is the Tax Court's construction of the bank's consent to distri-

bution as a release of the claim. Surely, in view of the record, that is an absurd conclusion.

XI.

THERE IS NO ELEMENT OF GIFT INVOLVED IN THIS CASE.

Respondent says (Resp. Br. p. 21) "that if we adopt petitioners' reasoning, at the time of decedent's death a liability existed but decedent had no recourse over since her rights had not ripened. Without recourse the transaction was a gift and not deductible under Section 812(b)(3)".

Although at decedent's death she had no rights over under the law of California, she was not without protection. If and when in the future the guaranty were paid, there would *then* be rights over under our law.

These were commercial guarantees required by the bank. The fact that under California law there were no rights over which existed as of the date of decedent's death does not make the case one of gift.

This is not a case where the decedent sought to diminish her taxable estate by creating obligations not meant correspondingly to increase it (1 *Paul* on *Federal Estate & Gift Taxation*, p. 692, Sec. 1120).

CONCLUSION.

Petitioners respectfully submit that the claim was fully deductible and that this Court may arrive at its own conclusions as to matters of law and in view of the clear cut

errors in law pointed out by petitioners this Court should hold as matters of law:

1. That the consent to distribution was what its name implies and not an abandonment of the bank's claim or a waiver of the bank's right.

2. That since there were no rights over having a fair market value and existing as of the date of decedent's death, the claim based on the absolute and unconditional guaranty imposed a primary liability and was deductible in full from the gross estate.

3. That it was error for the Tax Court to exclude petitioners' proffered evidence of the fair market value of the rights over.

4. That it was error for the Tax Court to impute an intent to the bank to abandon its claim and relinquish its right while disregarding the uncontradicted testimony to the contrary and in the absence of making a finding of fact that the bank so intended.

The *Parrott* and *Buck* cases are not applicable here because here there has been no payment of the debt by the principal debtor or by a co-guarantor.

Under the rule of the *Wragg* case, the rights over, being non-existent, had no fair market value and it was therefore proper to deduct the claim in full.

Dated, Oakland, California,

August 20, 1945.

Respectfully submitted,

M. W. DOBRZENSKY,

JAMES H. ANGLIM,

Attorneys for Petitioners.

DEC 21 1945

FILED

No. 11,046

IN THE
United States Circuit Court of Appeals
For the Ninth Circuit

ESTATE OF ETHEL M. DUVAL, deceased, by
THOMAS M. ROBINSON, JR., and WESTON
SHATTUCK ROBINSON, as executors of her
last will and testament,

Petitioners,

VS.

COMMISSIONER OF INTERNAL REVENUE,

Respondent.

PETITIONERS' PETITION FOR A REHEARING.

M. W. DOBRZENSKY,
JAMES H. ANGLIM,
Central Bank Building, Oakland 12, California,
Attorneys for Petitioners.

FILED

DEC 21 1945

PAUL P. O'BRIEN,
CLERK





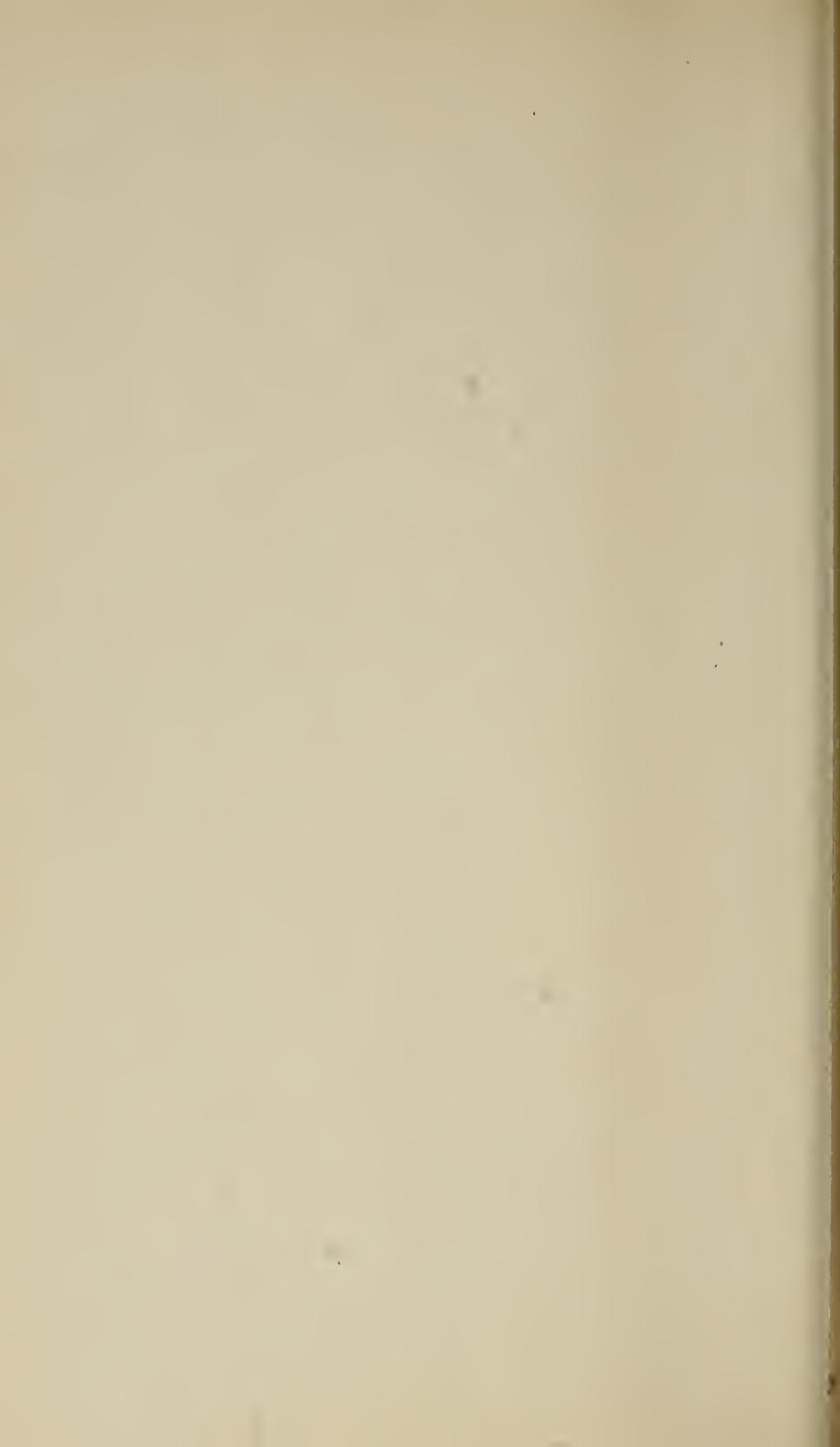


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IN THE
United States Circuit Court of Appeals
For the Ninth Circuit

ESTATE OF ETHEL M. DUVAL, deceased, by
THOMAS M. ROBINSON, JR., and WESTON
SHATTUCK ROBINSON, as executors of her
last will and testament,

Petitioners,

vs.

COMMISSIONER OF INTERNAL REVENUE,

Respondent.

PETITIONERS' PETITION FOR A REHEARING.

*To the Honorable Francis A. Garrecht, Presiding Judge,
and to the Honorable Associate Judges of the United
States Circuit Court of Appeals for the Ninth Circuit:*

Come now Thomas M. Robinson, Jr. and Weston Shattuck Robinson, as executors of the last will and testament of Ethel M. DuVal, deceased, petitioners herein, and respectfully petition this Court that the decision of this Court, rendered herein November 24, 1945, be set aside and a rehearing of the cause be granted on each and all of the following grounds:

(a) This Court has misconceived the meaning and effect of *Lyeth v. Hoey*, 305 U. S. 188, which is not author-

ity for the proposition stated by the Court, that the revenue acts are intended to have a uniform application “and to bring into the gross estate what is fundamentally the same in all states, not colored by local characterization”, the true rule being that the existence of a property right to be included in the gross estate *must be determined by the local law.*

(b) The Court has apparently overlooked entirely the requirement that when assets are included in the gross estate the only basis on which they can be included is their “*fair market value*” at the date of death and the fact that the maker and co-guarantor of the note were solvent and able to pay does not prove “*fair market value*” as defined by Reg. 105, Sec. 81.0(a), or justify the exclusion of evidence of fair market value.

(All emphasis herein is ours unless otherwise stated.)

I.

THE COURT'S MISCONCEPTION OF *LYETH v. HOEY*.

In its opinion, citing *Lyeth v. Hoey*, 305 U. S. 188, this Court said:

“* * * The revenue acts are intended to have a uniform application *and to bring into the gross estate what is fundamentally the same in all states; not colored by local characterization.* * * *”

The italicized portion of this statement, we respectfully submit, is not the law. *The local law must be looked to in order to ascertain the existence of property rights* which are subject to inclusion in the gross estate under I.R.C. Sec. 811 and Reg. 105, Sec. 81.0(a) et seq.

The Supreme Court in its later decision of *Helvering v. Stuart* (1942), 317 U. S. 154, explains *Lyeth v. Hoey* and says that it determined only *what existing interests should be taxed*, and *not* what interests or rights *had been created*. Thus the Court, speaking of the statute making the taxability of trust income depend upon the possibility of revesting the trust property, or the distribution of the trust income to the settlor, said (p. 162) :

“* * * Congress has selected an event, that is the receipt or distribution of trust funds by or to a grantor, *normally brought about by local law* and has directed a tax to be levied if that event may occur. Whether that event may occur depends upon the interpretation placed on the terms of the instrument by the local law. *Once rights are obtained by local law*, whatever they may be called, *these rights* are subject to the *federal definition of taxability*. Recently in dealing with the estate tax levied upon the value of property passing under a general power, we said ‘*state law creates legal interests and rights*. The federal revenue acts designate what interests, or rights, *so created*, shall be taxed.’ *Morgan v. Commissioner*, 309 U. S. 78 (a case dealing with the taxability at death of property passing under a general power of appointment). In this case, *as in Lyeth v. Hoey*, we were determining what interests or rights should be taxed, *not what interests or rights had been created* and therefore applied the federal rule (citing cases). In this view, the rules of law to be applied are those of Illinois.

* * *”

It is submitted that *Helvering v. Stuart* shows plainly the limitation upon the holding in *Lyeth v. Hoey*.

Under I.R.C. Sec. 811(a) all “*property*” of the decedent *to the extent of his interest therein at the time of his death*

is includible in the gross estate. Either by express reference or necessary implication, the statute requires us to look to the local law to ascertain *what is includible property*. (See *Crooks v. Harrelson*, 282 U. S. 55, holding that real estate was not includible in decedent's gross estate because, under the state law, it was not subject to the payment of the charges against the estate or the expenses of distribution.)

No considerations of uniform application of federal tax laws justify disregarding the local law, to ascertain the existence of property includible in the gross estate, or justify including in the gross estate that which is not property, in existence at the date of decedent's death.

It makes no difference what the law is in other states,—here the law of California governs with respect to what are a guarantor's rights over and it is *settled law* in California that a guarantor's rights of reimbursement, contribution and subrogation *do not exist* until the guarantor *actually* pays the guaranteed debt. (*Wills v. Woolner*, 21 Cal. App. 528,—reimbursement; *Pacific Freight Lines v. Pioneer Express Co.*, 39 Cal. App. (2d) 609,—contribution; and *Myers v. Bank of America*, 11 Cal. (2d) 92,—subrogation, and the other cases cited at pages 30-32 of Appellant's Opening Brief.)

We are aware of what this Court said in the *Parrott* case, but we wish nevertheless to point out that although the three cases there cited by this Court from states other than California do support the rule in Massachusetts, Indiana and Arkansas, *that the obligation to make contribution exists from the date of the execution of the note and mortgage* (*Rice v. Southgate*, 82 Mass. 142; *Griffen v.*

Long, 96 Ark. 268, and *Norris v. Churchill*, 20 Ind. App. 668), *these cases are directly contrary to and do not state the controlling California rule.*

The *Parrott* case says that the co-maker of the note and co-owner of the mortgaged property and the co-borrower (the decedent's brother) at the time of the decedent's death "was under *contractual obligation* to pay his half of the debt and to repay to her any sum that she might pay in excess of her one-half of the amount of their joint debt, *and that obligation existed from the date of the execution of the note and mortgage and was property.*"

But in the case at bar, the co-guarantor was not under any *contractual* obligation to make contribution and could not have any such *contractual* obligation to contribute until she paid more than her share, *at which time*,—the time of payment, *a new and implied contract* would arise on the basis of which the right to contribution would depend (*Pacific Freight Lines v. Pioneer Express Co.*, *supra*; *Jackson v. Lacy*, 37 Cal. App. (2d) 551; *Richter v. Henningsen*, 110 Cal. 530).

It is therefore respectfully submitted that this Court has misconceived the meaning and effect of *Lyeth v. Hoey* (*supra*) and that no considerations of uniform application of tax laws or otherwise, justify the Court in ignoring the local law to determine what rights over, if any, existed at the date of death, or in including in the gross estate that which is not property under the local law.

II.

**THE COURT HAS OVERLOOKED THE REQUIREMENTS OF
REG. 105, SEC. 81.0(a).**

This Court in its opinion, in justifying the Tax Court's exclusion of the petitioners' evidence offered to prove lack of *fair market value* of the rights over said that

“No difficulty is encountered in fixing the *value* of rights over because it was stipulated that the maker and co-guarantor were solvent and that where, as here, the company was able to pay the debt, there is no reason to encumber the record by the introduction of opinion evidence as to the value. Such evidence would have been of no assistance to the Tax Court.”

“Value” *at the date of death only* and not at any subsequent date is the “value” with which we are concerned. (*Ithaca Trust Co. v. U. S.* (1929), 279 U. S. 151, 155; *Wells Fargo Bank & Union Tr. Co. v. Comm’r.* (CCA-9), 145 Fed. (2d) 132.) But that is not all.

Reg. 105, Sec. 81.0(a), expounding I.R.C. Sec. 811, says that

“(a) The value of every item of *property* includible in the gross estate is the *fair market value thereof* at the time of decedent's death. * * *”

The section then defines “*fair market value*” as

“The *price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell.* * * *”

Thus “value” in the Internal Revenue Code means “*fair market value*”, as thus defined,—the *price* that would be paid, etc.

Subdivisions (b) to (g) inclusive of Sec. 81.0(a) each specify the method of evaluation of some specific type of property and subdivision (h) provides:

“(h) Other Property. Any property not specifically treated in this section should be valued *in accordance with the rule laid down in subsection (a) hereof.* * * *”

Since none of the other subdivisions specifies a method for valuing “rights over”, they can be included in the gross estate *only* on the basis of what *fair market value*, if any, which they had at decedent’s death.

When *Commissioner v. Wragg* (CCA-1), 141 Fed. (2d) 638, refers to the “value” of “rights over” as property, it *must* refer to their “*fair market value*” unless Reg. 105, Sec. 81.0(a), is meaningless.

The petitioners did not stipulate that the rights over either existed or had any fair market value. They merely stipulated that the maker and co-guarantor were solvent and able to pay, a *vastly different* thing from stipulating either as to the *existence or amount* of “*fair market value*” of rights over, as such value is defined in the regulations.

At the trial, the Tax Court *arbitrarily and capriciously* sustained an objection to petitioners’ offered testimony relating to the “*fair market value*” of the rights over, at the time of death, the Tax Court’s arbitrary action being well demonstrated by its answer to counsel’s question in which he asked upon which of two grounds the Tax Court sustained the objection. The judge replied: “*Let the record stand as it is.*”

There were no rights over in existence under California law at the date of death and to say, as this Court says, that decedent had a “*right to a right*” is but to beg the

question and to admit that any ultimate right of contribution was not in existence at the time of decedent's death and was therefore not includible in the gross estate. (*Skinner*, 13 B.T.A. 846; *Rodiek*, 33 B.T.A. 1020; see *U. S. v. Safety Car Heating & Lighting Co.*, 297 U. S. 881.) The "right to a right" which latter right was not in existence when decedent died and which might possibly come into being at some remote and indeterminate time after decedent's death is a very hazy and indefinite thing, hardly capable of evaluation as of the date of death by the required standards of evaluation as fixed by the law.

Opinion evidence is perhaps the only evidence that could have been of any assistance to the Tax Court in arriving at the only basis permitted by the Internal Revenue Code for the inclusion of rights over (if they existed) in the gross estate, namely, their "fair market value" as above defined.

As a matter of fact, as this Court has held, opinion evidence is frequently the only evidence that can be used to value intangibles. (See *Citrus Soap Co. etc. v. Lucas* (CCA-9), 42 Fed. (2d) 372, where opinion evidence was sustained as competently and satisfactorily establishing the value of good will.)

It makes no difference that there were no buyers for the "rights over" (if they existed) because, as the Court said in *Bank of California v. Comm'r.* (CCA-9), 133 Fed. (2d) 428 (a case dealing with the valuation of a non-assignable claim for refund where it was questioned whether a non-assignable asset could have a fair market value):

"Article 13 defines the term 'fair market value' as 'the price at which the property would change hands between a willing buyer and a willing seller, neither

being under any compulsion to buy or sell'. *In applying this definition we are required to assume the existence of a willing buyer and a willing seller, regardless of whether they actually existed or not, and to assume that the property could and would change hands even though such a change could not in fact occur.*'

We still must use the formula of "fair market value".

The very definition and concept of "fair market value" in the regulations obviously means more than that the maker and co-maker were solvent and able to pay at the time of decedent's death. What *price* would be developed in the *market* between the willing *buyer* and the willing *seller* is quite another thing.

From a purely practical point of view, *how, on the date of decedent's death, without recourse to opinion evidence, could it be determined at what price, if any, the "right to a right" of contribution, subrogation or reimbursement which might subsequently arise, would have changed hands between a willing seller and a willing buyer?*

The "right to a right" could only be a right to a *right obviously not in existence at decedent's death* and which *might* subsequently, at some unknown date arise if the decedent's estate paid the guaranteed debt.

Therefore, what rights decedent's estate *might have at some indeterminate time* after decedent's death should not be taken into consideration in fixing the gross estate (*Wells Fargo Bank & Union Tr. Co. v. Comm'r.* (supra)).

It is respectfully submitted that the Court's opinion shows on its face that the statutory definition of "*fair*

market value'' must not have been in the mind of the Court if it considered that "ability to pay" was fully equivalent to the *price* at which these alleged rights would have *changed* hands in the market between a willing seller and a willing buyer.

For the reasons aforesaid, the petitioners pray that the Court's aforesaid decision may be set aside and a rehearing granted.

Dated, Oakland, California,
December 21, 1945.

M. W. DOBRZENSKY,
JAMES H. ANGLIM,
Attorneys for Petitioners.

CERTIFICATE OF COUNSEL.

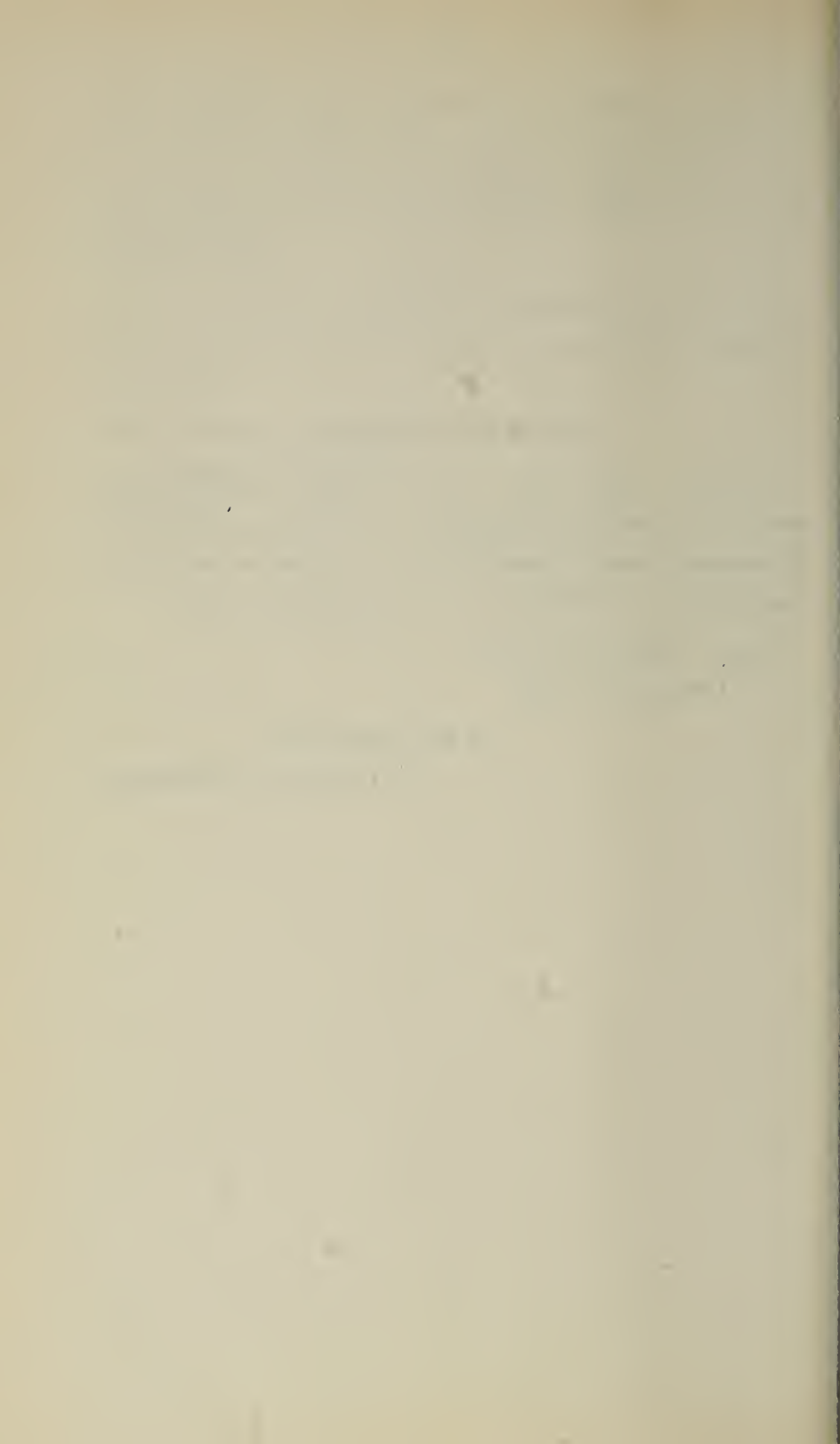
I hereby certify that I am of counsel for petitioners herein and that in my judgment the foregoing petition for a rehearing is well founded in point of law as well as in fact and that said petition is not interposed for delay.

Dated, Oakland, California,

December 21, 1945.

M. W. DOBRZENSKY,

Of Counsel for Petitioners.



No. 11054

IN THE

United States Circuit Court of Appeals

FOR THE NINTH CIRCUIT

INTERNATIONAL CARBONIC ENGINEERING
COMPANY,

Appellant,

vs.

NATURAL CARBONIC PRODUCTS, INC., a corporation, GEORGE PEPPERDINE FOUNDATION, a corporation, L. H. POLDERMAN, W. L. BENSON and C. B. BENSON, individually and as a copartnership doing business under the fictitious firm name and style of Natural Carbonic Products,

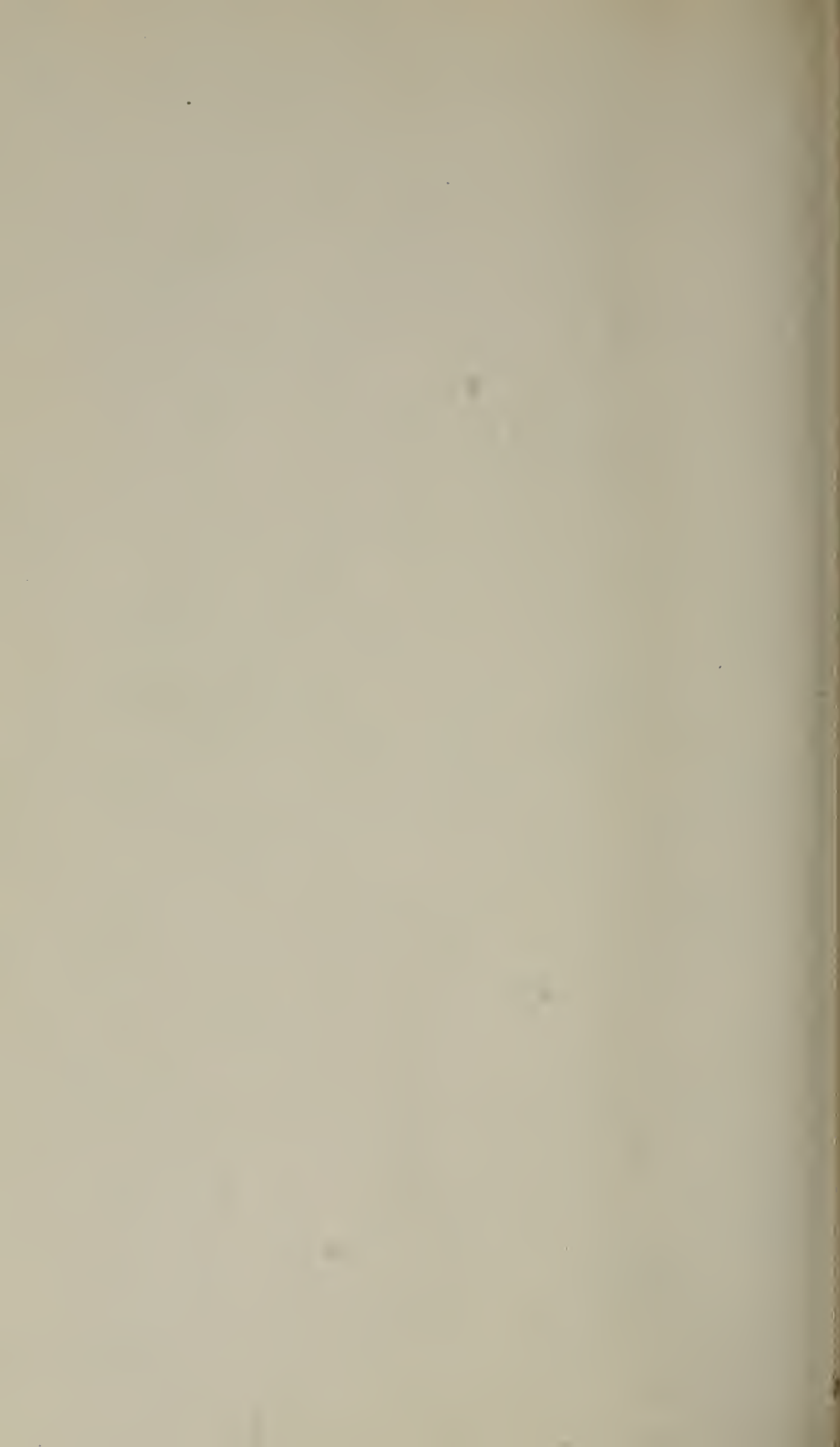
Appellees.

TRANSCRIPT OF RECORD

VOLUME I

(Pages 1 to 422 Inclusive)

Upon Appeal from the District Court of the United States
for the Southern District of California,
Central Division



No. 11054

IN THE

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Appellees.

TRANSCRIPT OF RECORD

VOLUME I

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Upon Appeal from the District Court of the United States
for the Southern District of California,
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NAMES AND ADDRESSES OF ATTORNEYS:

For Appellant:

LYON & LYON,
LEONARD S. LYON,
REGINALD E. CAUGHEY,
811 West Seventh St.,
Los Angeles 14, Calif.

For Appellees:

C. A. MIKETTA,
210 West Seventh St.,
Los Angeles 14, Calif.

HARRIS, KIECH, FOSTER & HARRIS,
WARD D. FOSTER,
471 Chamber of Commerce Bldg.,
Los Angeles 15, Calif. [1*]

*Page number appearing at foot of Certified Transcript.

In Civil Action, File No. 1851-RJ
In the United States District Court
Southern District of California

Central Division

INTERNATIONAL CARBONIC ENGINEERING
COMPANY and INTERNATIONAL CARBONIC
INC.,

Plaintiffs, ,

vs.

NATURAL CARBONIC PRODUCTS, INC.,

Defendant.

PLAINTIFFS' BILL OF PARTICULARS

Now come the plaintiffs and in answer to specifications 1, 2 and 3 of defendant's Motion for a Bill of Particulars, and pursuant to the order of Court heretofore entered, file their Bill of Particulars as follows:

I

In response to specification 1, plaintiffs state that the acts of infringement complained of were and are being committed by the defendant at its plant near Niland, Imperial County, California. [6]

II

In response to specification 2, plaintiffs assert in this case that claims 4, 11, 14, 18, 28, 30, 31, 32, 33, 34, 35 and 36 of patent in suit No. 2,025,698 each define a combination of elements; that the particular combination of elements defined in each of said claims was a new and useful invention at the time of the invention thereof by Harry W. Cole and Malcolm W. McLaren, and that said

respective combination of elements rendered each of said claims patentable over the prior art; plaintiffs do not assert in this case that any element of any of said claims is in and of itself new and patentable apart from the combination defined in the claims.

III

In response to specification 3, plaintiffs assert in this case that claims 38 and 39 of patent in suit No. 2,025,698 each define a combination of steps; that the particular combination of steps defined in each of said claims was a new and useful invention at the time of the invention thereof by Harry W. Cole and Malcolm W. McLaren and that said respective combination of steps rendered each of said claims patentable over the prior art; plaintiffs do not assert in this case that any step in either claim 38 or claim 39 of said patent in suit No. 2,025,698 is in and of itself new and patentable apart from the combination defined in the claims.

INTERNATIONAL CARBONIC ENGINEERING
COMPANY, INTERNATIONAL CARBONIC,
INC.,

By LYON & LYON .

Their Attorneys.

LYON & LYON

811 West Seventh Street
Los Angeles, California

LEONARD S. LYON

R. E. CAUGHEY

HUGH L. MORRIS

Counsel.

[Title of District Court and Cause.]

ORDER TO INSPECT

The cause having come on to be heard on plaintiffs' application for an Order Fixing Time for Inspection and the Court having heard counsel for the parties:

It Is Hereby Ordered:

That the plaintiffs serve and file their Bill of Particulars as to Items 2 and 3 on Tuesday, January 20, 1942; that defendant permit plaintiffs, by Messrs. R. E. Caughey, A. E. Peck and H. W. Cole, to inspect the three presses employed in the defendant's plant near Niland, California, for the manufacture of solid carbon dioxide, and observe the operation thereof, on the morning of January 22, 1942; that plaintiffs, their attorneys and representatives, are enjoined from disclosing to others, or from [10] employing for any purpose other than the purpose of this case, any confidential information which they may acquire or observe during said inspection; that plaintiffs shall serve and file particulars requested in Item 4 of defendant's Motion for Particulars, as heretofore ordered by this Court, on or before February 5, 1942.

Dated: This 20 day of January, 1942.

RALPH E. JENNEY

Judge.

The foregoing Order is hereby approved:

LYON & LYON

R. E. CAUGHEY

HUGH MORRIS

Attorneys for Plaintiffs

C. A. MIKETTA

H. L. BURRELL

Attorneys for Defendant.

[Endorsed]: Filed Jan. 20, 1942. [11]

[Title of District Court and Cause.]

INTERROGATORIES PROPOUNDED BY PLAINTIFFS PURSUANT TO RULE 33 OF THE RULES OF CIVIL PROCEDURE, TO BE ANSWERED SEPARATELY AND FULLY IN WRITING UNDER OATH BY ANY OFFICER OF DEFENDANT CORPORATION COMPETENT TO TESTIFY IN ITS BEHALF.

(1) Was defendant using at its plant near Niland, Imperial County, State of California, at the time the complaint herein was filed, the three presses in which carbon dioxide snow is compressed into blocks, referred to in Paragraph VI of defendant's answer?

(2) If the answer to Interrogatory (1) is in the affirmative, was each of the said three presses then being used?

(3) For what length of time immediately prior to the time of the filing of the complaint herein, had each of the said three presses been used by defendant at its plant near Niland, Imperial County, State of California, or elsewhere? [23]

(4) When did defendant begin the use of each of said three presses at its plant near Niland, Imperial County, State of California, or elsewhere?

(5) Has defendant used said three presses or any thereof since the filing of the complaint herein?

(6) If defendant has used, since the filing of the complaint herein, less than all of said presses, state which presses have been so used and the time or times of the use of each.

(7) Which of said three presses has a compressing chamber?

(8) Is solid carbon dioxide produced by defendant, formed in each of said chambers?

(9) Which of said compressing chambers is openable at one end to permit the removal or ejection of the carbon dioxide solidified and compressed therein?

(10) Which of said chambers has connected therewith means for closing it or them at its open end, during the solidification therein of the carbon dioxide?

(11) Which of said chambers has connected therewith means for closing said chamber at its open end during the compressing operation?

(12) Which of said chambers has connected therewith means for moving the closing means, after the compressing operation, for removal of the compressed or compacted carbon dioxide?

(13) In which of said chambers is the compressing means adapted to eject the compressed carbon dioxide after the carbon dioxide therein has been compressed or compacted?

(14) Which of said chambers has connected or associated therewith, means or apparatus for supplying thereto liquified carbon dioxide for expansion to produce in the chamber an accumulation of solidified carbon dioxide? [24]

(15) In which of said chambers is the carbon dioxide compressed, against a movable head of the chamber, by a ram or plunger?

(16) With respect to which of said chambers is the means for opening and closing the movable head of the chamber hydraulically operated?

(17) With respect to which of said chambers is the ram or plunger for compressing the solidified gas hydraulically operated?

(18) Which of said chambers has connected or associated therewith apparatus or means for controlling the gas pressure in said chamber?

(19) Describe, and illustrate by a drawing or drawings, the means or apparatus for controlling the gas pressure in said chamber and the relationship, connection, or association of such apparatus with said chamber.

(20) What pressure is maintained by defendant in each of said chambers,

(a) during the time that liquified carbon dioxide is being supplied to the said chambers, and

(b) during the period, if any, intervening between the time the supply of liquified carbon dioxide to the chamber is shut off and the completion of the solidification of the carbon dioxide?

(21) Is all of the liquified carbon dioxide supplied to the chamber of any of said presses converted therein into a solid? Or is part of the liquified gas supplied to the chamber in each of said presses converted into a solid and the remaining portion of the liquified gas converted into gaseous form?

(22) Which of said chambers has connected thereto or associated therewith a conduit or pipe, or conduits or pipes, through which the portion of the liquified gas supplied to the chamber that is therein converted into a gas, passes from said chamber? [25]

(23) Which of said chambers, during the period that it is being supplied with liquified carbon dioxide and during the period of solidification, is substantially closed to atmosphere?

(24) In which of said chambers is the plunger or ram movable to press an accumulated mass of solidified gas into a block?

(25) Which of said chambers is substantially closed to the atmosphere during the pressing stroke of the ram or plunger?

(26) With respect to which of the said chambers is the movable head or closure member thereof in its completely closed position prior to the completion of the pressing stroke of the ram or plunger?

(27) In which of said chambers is said plunger normally inactive during expansion of the liquified gas and the accumulation of the solidified gas in the chamber?

(28) Which of said chambers has connected or associated therewith means or apparatus for maintaining the movable head or closure member in chamber-sealing position, against opening under the action of pressures within the chamber?

(29) In which of said chambers is there a pressing plunger, reciprocal therein, for pressing solidified carbon dioxide in the chamber into a block against the movable or closure head, while said movable head is held in chamber-closing position?

(30) In which of said chambers is the plunger so formed as to permit passage of gas therepast, while the plunger is being moved in the chamber?

(31) Which of said chambers is, during operation, vertically disposed?

(32) Which of said chambers has a closed top?

(33) Which of said chambers has a vertically disposed fluid pressure cylinder below it? [26]

(34) Which of said cylinders has a vertically reciprocal plunger therein?

(35) Which of said cylinders has a chamber-closing head mounted on the end of such pressure cylinder and

vertically movable therewith between position closing an end of the chamber and a position opening an end of the chamber?

(36) Which of said chambers has a pressing plunger vertically reciprocal therein for pressing a mass of solid carbon dioxide in the chamber into a block against the chamber-closing head when the head is in chamber-closing position?

(37) In which of said chambers is there a pressing plunger movable toward and from the closing head and in normally inactive position located in the chamber spaced from the closing head?

(38) Which of said chambers has a means connected or associated therewith for supplying liquified carbon dioxide to the chamber with the closing head in closed position and the pressing plunger in inactive position spaced from the closing head?

(39) Which of said chambers has associated therewith a closing head movable from chamber-closing position to a position spaced from the chamber, for unobstructed removal of a block of solid carbon dioxide from the chamber?

(40) Point out on a diagrammatic drawing for each type of the three presses used by defendant, the several parts thereof hereinbefore inquired about, designating them on such drawing or drawings by letters or numerals and explanatory statements for each such letter or numeral, and also indicating thereon by arrows the course or pathway of the carbon dioxide from its introduction into such mechanism in the form of gas to and including its extrusion therefrom in the form of a solid block.

(41) Which of the many patents pleaded by reference in Paragraph X of defendant's answer heretofore filed,

will defendant [27] rely upon at the trial of this action (a) as anticipations and (b) as showing the state of the art?

(42) In what respects does each of the patents pleaded by reference in Paragraph X of defendant's answer that defendant will rely upon at the trial of this action, either as anticipations or as showing the state of the art, disclose the combination of elements, steps, or processes set forth in Claims 4, 11, 14, 18, 28, 30, 31, 32, 33, 34, 35, 36, 38 and 39 or any thereof of United States Letters Patent No. 2,025,698?

(43) In what respects does the publication referred to in Paragraph X of defendant's answer disclose the combination of elements, steps or processes called for in each of the Claims 4, 11, 14, 18, 28, 30, 31, 32, 33, 34, 35, 36, 38 and 39 or any thereof of United States Letters Patent No. 2,025,698?

(44) When, where, and for what period or periods of time was the alleged invention described or claimed in each of the Letters Patent pleaded by reference in Paragraph X of defendant's answer heretofore filed, publicly used as alleged by defendant in Paragraph X of its answer?

(45) When and for what period or periods of time was each of the structures and processes alleged in Paragraph X of defendant's answer to have been publicly used by Norman M. Small, Frank R. Zumbro, Raymond C. Pierce and Malcolm W. McLaren, so publicly used?

(46) In what respects did each of the devices or processes referred to in the preceding Interrogatory have, contain, or include the combination of elements, steps or processes called for by Claims 4, 11, 14, 18, 28, 30, 31, 32, 33, 34, 35, 36, 38 and 39 and each thereof of United States Letter Patent No. 2,025,698?

(47) What was the structure, functioning, mode of operation, the time and temperature range or ranges employed or used in each of the machines referred to in Interrogatory 45 hereof, [28] at each stage of the progress of the carbon dioxide therethrough, together with the state of the carbon dioxide when introduced into said device or machine, how it was introduced thereinto, and the state or condition thereof when removed therefrom, setting forth, as well, the points in the progress of the carbon dioxide through the machine at which carbon dioxide in liquid form was converted (a) into snow and (b) into a compressed block of ice?

(48) Illustrate by drawings each of the machines or devices referred to in Interrogatory 45 hereof, in such detail and character as will disclose fully both the internal and the external structure of said machines or devices.

The defendant, by an officer thereof competent to testify in its behalf, shall answer separately and fully each of the foregoing Interrogatories under oath as provided for in Rule 33 of the Rules of Civil Procedure.

Dated: This 17th day of August, 1942.

INTERNATIONAL CARBONIC ENGINEERING
COMPANY and INTERNATIONAL CAR-
BONIC, INC.

By HUGH M. MORRIS
LEONARD S. LYON
LYON & LYON
REGINALD E. CAUGHEY
Their Attorneys

[Endorsed]: Filed Aug. 18, 1942. [29]

[Title of District Court and Cause.]

DEFENDANT'S ANSWERS TO PLAINTIFFS'
INTERROGATORIES

L. H. Polderman, an officer of the defendant corporation, answers plaintiffs' interrogatories as follows:

1. In answer to Interrogatory 1, plaintiffs are advised that three presses for compressing snow into blocks were owned by defendant at the time the complaint herein was filed, that is, on October 21, 1941.

2. On October 21, 1941, the H.P.M. press was being used in the performance of its inherent function. The two Frick presses were not in operation.

3. The two Frick presses were originally purchased in 1934 by Carl M. Einhart and used by Pacific-Imperial Dri-Ice, Inc., [30] later known as Pacific Imperial Dry Ice Company. These were used in the performance of their inherent functions, that is, the pressing together of carbon dioxide snow into blocks, intermittently during the period 1934 to prior to filing of the complaint. The H.P.M. press was purchased in December, 1940 and installed in February or March, 1941. This press has been intermittently used in compressing carbon dioxide snow into blocks from about March, 1941 to immediately prior to the filing of the complaint.

4. See answer to Interrogatory 3.

7-40. In response to Interrogatories 7 to 40, affiant attaches hereto Exhibits 9 and 10. Certain of the interrogatories are amplified hereafter.

With respect to Interrogatories 18 and 19, defendant can not truthfully answer these interrogatories since the scope or meaning of "controlling the gas pressure" is not

known. Defendant states that a plug cock or valve is in the so-called blow-back line leading from the press to the compressor, but this is not set to give a definite, predetermined or controlled pressure in the press nor in the blow-back line and that the pressure in the press and blow-back line varies from atmospheric or 0 pounds gage to about 80 pounds gage pressure.

With respect to Interrogatory 20b, defendant states that this interrogatory can not be fully answered because it is ambiguous and unintelligible.

With respect to Interrogatory 30, defendant states that to the best of its knowledge and information leakage occurs past the upper plunger or platen in each of the presses.

With respect to Interrogatory 40, defendant states that said interrogatory is confusing and unintelligible because it refers to the introduction of carbon dioxide into the mechanism "in the form of a gas". In defendant's presses liquid carbon dioxide is supplied and such liquid upon expansion is converted [31] in part into solid carbon dioxide in the manner characteristic of the physical properties of carbon dioxide and well known since about 1860.

41. Answering Interrogatory 41, defendant states that each of the patents now listed in Paragraph X of the answer heretofore filed—

(a) will be relied upon during trial as an anticipation of one or more elements, means or steps of the purported invention of the patent in suit;

(a) will be relied upon as showing the state of the art and that patent No. 2,025,698 lacks invention thereover.

44. Defendant states in answer to Interrogatory 44 that effort is being made to ascertain the precise dates and periods of time requested in this interrogatory and that such information will be transmitted to plaintiffs as soon as it is obtained, but at present it is not known to defendant.

45. Defendant states in answer to Interrogatory 45 that effort is being made to ascertain the precise dates and periods of time requested in this interrogatory and that such information will be transmitted to plaintiffs as soon as it is obtained, but at present it is not known to defendant.

47. Defendant states in response to Interrogatory 47 that to the best of its present information each of the machines and processes used by Norman M. Small, Frank R. Zumbro, Raymond C. Pierce and Malcolm W. McLaren included a chamber into which liquid carbon dioxide was supplied; a part of the liquid so supplied expanded into a gas while another was converted into solid particles of carbon dioxide; that the gas was returned for use in the system while the solid particles were compressed into blocks; that each of the machines included a chamber and platens or pressure heads, as is the case in any press designed to compress material into blocks, and that the structures and steps employed were those [32] available in and known by the art.

L. H. POLDERMAN

[Verified.]

[Endorsed]: Filed Oct. 20, 1942. [33]

[Title of District Court and Cause.]

DEFENDANT'S ADDITIONAL AND AMPLIFIED
ANSWER TO PLAINTIFFS' INTERROGA-
TORIES

L. H. Polderman, an officer of the defendant corporation, amplifies the answers heretofore filed to plaintiffs' interrogatories, as follows:

5. The answer to plaintiffs' Interrogatory 5 is "yes".

6. In answer to plaintiffs' Interrogatory 6, defendant states that three presses have been used intermittently and at various times.

L. H. Polderman further states that the statements, made in Defendants' Answers to Plaintiffs' Interrogatories, which answers were sworn to by him on October 19, 1942 and filed October 20, 1942, were the best answers that L. H. Polderman could make of matters within his personal knowledge, and that [34] there is no officer of defendant corporation having a better personal knowledge of the matters inquired into.

L. H. POLDERMAN

[Verified.]

[Endorsed]: Filed Mar. 25, 1943. [35]

[Title of District Court and Cause.]

FURTHER ANSWERS TO PLAINTIFFS'
INTERROGATORIES

L. H. Polderman, an officer of the defendant corporation, further answers the interrogatories heretofore filed by plaintiffs, as follows:

1. Prior to the filing of the complaint herein defendant had used the three presses referred to in Paragraph VI of defendant's answer; but at the time the complaint was filed defendant was not using the two Frick presses.

2. If by "then" plaintiffs refer to the time the complaint was filed, i. e., October 21, 1941, then the answer is in the negative.

3. Prior to the time of the filing of the complaint, defendant had used, at its plant near Niland, each of the three presses. The presses were not used continuously. The question is ambiguous as to what is meant by "length of time immediately prior to the time of filing" and defendant can not answer this except as formerly answered. [36]

4. Defendant first used the H.P.M. press at its plant near Niland on about March 1941. To the best of its knowledge and belief, the two Frick presses were first used at Niland in 1934 and by this defendant in February or March 1940.

9. Each of the presses includes a wall forming a cylinder or chamber in which carbon dioxide snow is collected and compressed into a block; it is assumed that the interrogatories refer to this wall forming the cylinder as "compressing chamber". In the light of such definition, the answer to Interrogatory 9 is,—all of them.

10. None of the chambers, as defined above, has connected therewith means for closing them.

11. None of the chambers, as defined in answer to Interrogatory 9 herein, has connected therewith means for closing them.

12. None of the chambers, as defined in answer to Interrogatory 9 herein, has connected therewith means for moving a closing means.

13. To the best of our knowledge and understanding of this interrogatory,—all of them.

14. This interrogatory, as revised by the Court, reads: "Into which of said chambers may liquefied carbon dioxide be injected?". The answer is,—all of them.

15. All of them.

16. If the term "hydraulic" refers to both water and oil, the answer is,—all of them.

17. All of them.

18 and 19. Defendant can not truthfully answer these interrogatories as phrased since the meaning and scope of the term "controlling the gas pressure in said chamber" is not understood and no particular stage of the operations is referred to. Defendant states that no automatic means are employed for [37] maintaining any predetermined pressure in the chambers, as stated in defendant's Exhibits 9 and 10. There is a blowback line connected to each chamber and a manually operated valve in each blowback line, as shown by defendant's Exhibits 9 and 10, such blowback lines running back to a compressor. Upper and lower platens or rams assist in closing the ends of the chambers and thereby cause pressure to build up in the space enclosed by the chambers when

liquid CO₂ is admitted into each chamber. Lower platen of H.P.M. press is slightly lowered at end of snow forming to let out some additional gas and is kept in such slightly lowered position during pressing. Upper ram of Frick presses is slightly raised to let out some additional gas and kept in such slightly raised position while pressing upwardly with lower ram.

20. No predetermined pressure schedule is maintained by defendant and pressures vary with operator on the job, temperatures of air, whether presses have been working immediately prior or not, etc.

(a)—To the best of our knowledge, pressure in each chamber rises from 0 pounds gauge to between 62 to 72 pounds gauge (occasionally going to 80 pounds gauge) during the time that liquid carbon dioxide is being admitted into chambers.

(b)—Defendant does not understand this interrogatory but volunteers the following: After the valve admitting liquid carbon dioxide is shut off manually, the pressure in the chamber starts dropping and when pressure is down to between 10 pounds and 25 pounds gauge, the blowback line is manually opened to the atmosphere (instead of to the compressor) to permit the remaining gas in chambers to blow off to the atmosphere. Platens and rams are then manually operated as [38] stated in answer to Interrogatory 19. Defendant does not know what pressure exists in the snow while it is being compressed into a block.

21. The answer to the first part of this interrogatory is in the negative; to the second part, in the affirmative.

22. All of them.

23. All of the chambers permit gas to escape therefrom during this period.

24. All of them.

25. None of them.

26. None of them.

27. All of them.

28. All of the chambers have a ram or platen associated therewith which will resist opening under the action of pressure within the chamber.

29. None of them. Defendant does not operate in this manner.

30. Defendant states that gas escapes from each chamber while a plunger or ram is moved to compress snow into a block.

31. All of them.

32. All chambers can be closed or opened at the top.

33. All of them.

34. All of them.

35. All of them.

36. None of them.

37. This interrogatory is ambiguous. Defendant, interpreting this interrogatory very broadly, states, in answer thereto,—all of them.

38. All of them.

39. All of them. [39]

47. In response to Interrogatory 47, defendant states that to the best of its present information each of the machines used by Norman M. Small, Frank R. Zumbro, Raymond C. Pierce and Malcolm W. McLaren included a chamber provided with pipe means for supplying liquid

carbon dioxide to such chamber, means for opening one end of each of the chambers, a pipe means for permitting discharge of unsolodified gases from the chamber, and a movable element extending into each chamber for compacting the snow into a block. A manually operated valve was included in the pipe leading from the chamber and through which uncondensed gases could be discharged. In the processes used by said Small, Zumbro, Pierce and McLaren the carbon dioxide was in liquid condition at the time of its introduction into the chamber. The temperature of the carbon dioxide immediately prior to its introduction into the chamber is not known to this defendant. To the best of defendant's present information, after the liquid carbon dioxide was introduced into the chamber, a part of it was converted into a snow due to the rapid expansion and vaporization of the liquid, and a part of such carbon dioxide remained in the form of a gas. Carbon dioxide snow which formed within the chamber was retained in major part in the chamber. Uncondensed gas was released through a valved line into the atmosphere. To the best of its present information, defendant states that the pressure in each of the chambers reached and exceeded the so-called tripple point (about 60-62 pounds) although specific information thereon is not available at this time; and then the pressure dropped to substantially atmospheric pressure. After the snow was compressed, the resulting product was in the form of a block, the blocks produced by the various men mentioned differing somewhat in degree of compactness.

L. H. POLDERMAN [40]

[Verified.]

[Endorsed]: Filed May 29, 1943. [41]

In the United States District Court
Southern District of California

Central Division

Civil Action No. 1851-RJ

INTERNATIONAL CARBONIC ENGINEERING
COMPANY and INTERNATIONAL CARBONIC,
INC.,

Plaintiffs,

vs.

NATURAL CARBONIC PRODUCTS, INC., a corpo-
ration, GEORGE PEPPERDINE FOUNDATION, a
corporation, L. H. POLDERMAN, W. L. BENSON
and C. B. BENSON, Individually, and as a Copart-
nership doing business under the fictitious firm name
and style of NATURAL CARBONIC PRODUCTS,

Defendants.

FURTHER AMENDED AND SUPPLEMENTAL
COMPLAINT

For Infringement of United States Letters Patent No.
2,025,698

The plaintiffs, pursuant to Order of Court, hereby file
their Amended and Supplemental Complaint and allege as
follows:

I

Each of the plaintiffs, International Carbonic Engineer-
ing Company and International Carbonic, Inc., is a cor-
poration organized and existing under the laws of the
State of Delaware.

Defendant, Natural Carbonic Products, Inc., is a cor-
poration organized and existing under the laws of the
State of California.

Defendant, George Pepperdine Foundation, is a corporation organized and existing under the laws of the State of California. [42]

Defendants, L. H. Polderman, W. L. Benson and C. B. Benson, and each of them, are residents of the Southern District of California and are carrying on business as a copartnership under the fictitious firm name and style of Natural Carbonic Products within the Southern District of California, wherein the acts of infringement hereinafter complained of have been and are being committed.

II

This action arises under the Patent Statutes of the United States, as hereinafter more fully appears.

III

On December 24, 1935, United States Letters Patent No. 2,025,698 were duly and legally issued to plaintiff, International Carbonic Engineering Company, for an invention for gas solidifying apparatus; and since that date plaintiff, International Carbonic Engineering Company has been and still is the owner of those Letters Patent, and plaintiff, International Carbonic, Inc., or its predecessors, has been and still is the exclusive licensee of, to and under those Letters Patent with the right to sublicense others thereunder.

IV

Defendant, Natural Carbonic Products, Inc., for a long time prior to the filing of the original Complaint herein on October 21, 1941, and until on or about July 1, 1943, infringed upon said Letters Patent by using the gas solidifying devices, apparatus, processes and inventions, claimed by said patent; that defendant, George Pepperdine Foundation, during all of said period was the owner of

eighty percent (80%) of the issued stock of said defendant, Natural Carbonic Products, Inc., and directed and controlled the activities of said corporation; that on or about July 1, 1943, the defendant, George Pepperdine Foundation, purchased all of the assets of said defendant corporation, Natural Carbonic [43] Products, Inc., and assumed all of the liabilities thereof, including any and all liabilities of said defendant, Natural Carbonic Products, Inc., arising from infringement of the Letters Patent in suit; that thereafter said defendant, George Pepperdine Foundation, caused said defendant, Natural Carbonic Products, Inc., to be dissolved pursuant to the laws of the State of California, said dissolution becoming effective October 25, 1943; that the defendant, George Pepperdine Foundation, acquired as part of the assets of said defendant, Natural Carbonic Products, Inc., the properties near Niland, California, whereon the gas solidifying devices and apparatus employed by said Natural Carbonic Products, Inc. in infringing the Letters Patent in suit were and are located; that on or about July 1, 1943, defendant, George Pepperdine Foundation, leased said properties near Niland, California, including said gas solidifying devices and apparatus, to the defendant, L. H. Polderman; that the defendants W. L. Benson and C. B. Benson, nephews of the defendant L. H. Polderman, acquired an interest in said lease; that from on or about July 1, 1943, said individual defendants, L. H. Polderman, W. L. Benson and C. B. Benson, have operated the said properties near Niland, California, and the said gas solidifying apparatus and devices thereon in infringement of the Letters Patent in suit and with the knowledge and consent of the defendant, George Pepperdine Foundation; that plaintiffs allege upon information and belief that the

defendant, George Pepperdine Foundation, receives a consideration for said lease to said L. H. Polderman and to said copartnership based upon the volume of dry ice manufactured by means of said gas solidifying apparatus and devices; that said individual defendants, L. H. Polderman, W. L. Benson and C. B. Benson, were connected and associated with the defendant, Natural Carbonic Products, Inc., prior to on or about July 1, 1943, and were fully familiar with the infringing activities of said defendant as carried out on said [44] properties near Niland, California, and that said defendant, L. H. Polderman, managed and directed said infringing activities; that the defendant, George Pepperdine Foundation, is the successor in interest to the defendant, Natural Carbonic Products, Inc., and has leased said properties near Niland, California, and said gas solidifying apparatus and devices to said individual defendants L. H. Polderman, W. L. Benson and C. B. Benson, with the knowledge that said individual defendants, L. H. Polderman, W. L. Benson and C. B. Benson would continue to employ said gas solidifying apparatus and devices in infringement of the Letters Patent in suit and said individual defendants since on or about July 1, 1943, have employed said gas solidifying apparatus and devices in infringement of said Letters Patent, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39, thereof, whereby said defendant, George Pepperdine Foundation, and said individual defendants, L. H. Polderman, W. L. Benson and C. B. Benson, have jointly and severally infringed thereon and will continue to do so unless enjoined by this court.

V

Plaintiffs do not themselves manufacture or sell the patented devices, gas solidifying apparatus, but plaintiff.

International Carbonic, Inc., sublicenses others to manufacture said patented devices or to have the same manufactured for them, for their own use, and requires by all of its sublicense agreements that its sublicensees place the required statutory notice on all gas solidifying apparatus manufactured by or for them and each of them using or embodying the inventions under said Letters Patent, and plaintiffs allege upon information and belief that all of said sublicensees have placed the required statutory notice on such gas solidifying apparatus manufactured by or for and used by them and each of them under said Letters Patent. [45]

Wherefore, plaintiffs demand a preliminary and a final injunction against said defendants, and each of them, and those controlled by said defendants, and each of them, an accounting for profits and damages, and an assessment of costs against said defendants, and each of them.

INTERNATIONAL CARBONIC ENGINEERING
COMPANY

INTERNATIONAL CARBONIC, INC.

By LYON AND LYON

Their Attorneys

LYON & LYON

811 West Seventh Street

Los Angeles 14, California

HUGH S. MORRIS

LEONARD S. LYON

REGINALD CAUGHEY

Counsel.

[Endorsed] : Filed Feb. 28, 1944. [46]

[Title of District Court and Cause.]

FIRST AND AMENDED ANSWER TO FURTHER
AMENDED COMPLAINT

Defendants Natural Carbonic Products, Inc., L. H. Polderman, W. L. Benson and C. B. Benson, and Natural Carbonic Products, a copartnership, for their answer to the further amended and supplement complaint, allege as follows:

I.

Admit that Natural Carbonic Products, Inc. was a California corporation and that L. H. Polderman, W. L. Benson and C. B. Benson are residents of the Southern District of California and are carrying on a copartnership under the name and style of Natural Carbonic Products, but deny all other allegations of paragraph I of said further amended complaint. [47]

II

Admit that this court has jurisdiction of cases arising under the Patent Statutes; defendants allege that plaintiffs are barred from prosecuting this action and are not entitled to relief of any nature whatsoever because they do not come into court with clean hands and instead are employing the process of this court in attempting to unlawfully extend purported patent monopolies in a manner adverse to public policy and interest, as is more fully set forth hereafter.

III

Deny the allegations of paragraph III except that they admit that United States Letters Patent No. 2,025,698 were issued on December 24, 1935.

IV

In answer to paragraph IV, defendants admit that George Pepperdine Foundation acquired all of the assets of Natural Carbonic Products, Inc. in consideration of the discharge of indebtedness of Natural Carbonic Products, Inc. to said Foundation of a total amount in excess of the value of such assets, on or about July 1, 1943; admit that Natural Carbonic Products, Inc. was dissolved pursuant to the laws of the State of California, said dissolution becoming effective October 25, 1943; admit that on June 30, 1943 the Foundation leased certain properties near Niland, California, to L. H. Polderman; admit that W. L. Benson and C. B. Benson are nephews of L. H. Polderman, and that said Polderman, W. L. Benson and C. B. Benson formed a copartnership operating under the name and style of Natural Carbonic Products; admit that the Foundation receives a consideration for said lease to said L. H. Polderman, a part of which consideration is based upon the net profits received by the defendant L. H. Polderman; denies each and every of the other allegations of said paragraph. [48]

V

Defendants admit that plaintiffs do not manufacture, sell or use devices and gas solidifying apparatus, and deny all other allegations of paragraph V of the further amended and supplemental complaint.

VI

Defendants allege on information and belief that the patentees Harry W. Cole and Malcolm W. McLaren, named in the Letters Patent in suit and purported to be the joint inventors, were not the original and first inventors of that which is alleged to be patented by said patent in suit, but that on the contrary, the thing or things

alleged to be patented by said Letters Patent No. 2,025,698 and all substantial or material parts thereof, have been shown, described, patented and published in various Letters Patent and publications, and had been known to, publicly used and invented by other persons in this country, including the applicants of and the patentees for and the authors of the patents and publications and the persons and corporations hereinafter listed, more than two years before the purported invention by the patentees named in the Letters Patent in suit, and more than two years before the filing of the application upon which the Letters Patent in suit were issued, and more than two years before the filing of a description and claims on said purported inventions:

Malcolm W. McLaren	Jackson Heights, New York
James W. Martin	111 Broadway, New York, New York
Gustave T. Reich	c/o Pennsylvania Sugar Refining Company, Philadelphia, Penn.

United States Patents

<u>Patent No.</u>	<u>Issued</u>	<u>Patentee</u>
338,034	Mar. 16, 1886	J. P. F. Cartier
467,783	Jan. 26, 1892	David A. Sailor [49]
530,526	Dec. 11, 1894	Daniel L. Holden
533,871	Feb. 12, 1895	D. Drummond
579,866	Mar. 30, 1897	Herbert S. Elworthy
760,191	May 17, 1904	Edward L. Gaylord
876,352		Holden
955,454	Apr. 19, 1910	William J. Fleming
1,004,214	Sep. 26, 1911	Joseph Stehlin
1,018,568	Feb. 27, 1912	Harry P. Julius
1,054,772	Mar. 4 1913	Daniel L. Holden

1,104,920	July	28, 1914	W. S. Osborne
1,288,255	Dec.	17, 1918	L. Stastney
1,350,247	Aug.	17, 1920	R. W. G. Stutske
1,520,936	Dec.	30, 1924	James H. Dennedy
1,613,362	Jan.	4, 1927	Samuel E. Sheppard et al
1,631,037	May	31, 1927	William B. Kochenderfer
1,643,590	Sep.	27, 1927	Thomas B. Slate
1,659,431	Feb.	14, 1928	W. S. Josephson
1,659,434	Feb.	14, 1928	J. W. Martin
1,659,435	Feb.	14, 1928	J. W. Martin
1,726,373	Aug.	27, 1929	M. G. Voightlander
1,760,953	June	3, 1930	James W. Martin
1,822,788	Sep.	8, 1931	Josef Stoffels
1,887,692	Nov.	15, 1932	James W. Martin
1,887,693	Nov.	15, 1932	James W. Martin

German Patents

130,647	1902	Schmitz
142,704	1903	Diamanti
154,333	1904	Ver. Masch. fabr.
209,223	1909	Kern [50]

French Patent

246,808	Aug.	12, 1895	Henderson
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British Patents

13,684	Aug.	13, 1891	C. R. C. Tichborne et al
7,436	Apr.	11, 1895	H. S. Elworthy
2,450	Jan.	31, 1906	E. G. Elworthy
237,681		1925	Slate
263,922		1927	Haynes
294,584	July	26, 1927	W. Heseling
294,614	July	26, 1927	W. Heseling

Publication

New Apparatus for Making Carbonic Acid Snow
Compts. Rendu year 1884 (99,235)

Defendants ask leave to amend this answer to include other persons and corporations, patents and publications as soon as they are ascertained.

VII

Defendants allege that each of the claims of the patent in suit, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, are null and void and allege that each of said claims is for an aggregation of elements, or for an aggregation of old steps and functions, each of which was old in the art at the time of the purported invention thereof by said Cole and McLaren; that the said claims are null and void because they describe steps and elements in terms of function or result; that each of the claims of the patent in suit is void and invalid because it attempts to patent the natural law, function and mode of operation of individually old elements without the production of a new or novel result; defendants allege that the Letters Patent in suit, and each and every one of the claims thereof, is invalid, void and of no [51] effect because said Letters Patent were inadvertently issued and because they purport to claim the results and functions of well known devices and steps and that what is purported to be covered by said Letters Patent is an aggregation of old and independent steps and elements, the functions and effect of each of said steps and elements being matters of common knowledge to those skilled in the art to which the patent pertains long before the alleged invention thereof by the purported patentees of the patent in suit.

VIII

Defendants allege that the Letters Patent in suit, and each and every one of the claims thereof, is invalid, void and of no effect because the alleged invention or discovery purportedly described and claimed in said patent was

merely the result of the exercise of the ordinary faculties of reasoning aided by the special knowledge and facility of manipulation which are acquired through habitual and intelligent practice of the art, known as non-inventive mechanical skill, and was not a result of that inventive faculty which it is the purpose of the Constitution and the patent laws to encourage and reward.

IX

As a further defense, defendants allege that Letters Patent No. 2,025,698 in suit are invalid, void and of no force or effect because the specification and claims do not disclose or describe the purported invention in such clear, full and exact manner as to permit others to practice the alleged invention and because the aggregation of parts and steps therein named is inoperative to perform and incapable of performing the results and functions set forth in the patent and fails to teach how, in what manner, by what means and under what conditions the purported inventions may be constructed and operated and the purported results obtained; that each of the claims of the patent in suit is invalid, void and of no force or effect because said Letters Patent [52] and claims fail to clearly, fully and unambiguously describe the purported invention in the manner required by law.

X

Defendants allege that for the purpose of deceiving the public, the description and specifications filed by Cole and McLaren in the United States Patent Office were made to contain less than the whole truth relevant to their purported invention and more than is necessary to produce the desired effect; that said purported patentees and the plaintiffs herein jointly and severally knew for many years last past, and at all events prior to September 3, 1942,

that the patent in suit was defective and inoperative and that the claims thereof were invalid and included more than the alleged patentees had a right to claim, and that said Cole and McLaren had included in the claims of the patent, with deceptive intent, inoperative means and gases; that plaintiffs failed to apply for a reissue and failed to file a disclaimer in the manner provided for by law, and have purposely delayed taking such action in conformance to plaintiffs' conspiracy plan and attempt to extend their alleged monopoly contrary to the public interest; and that by reason of said failure and delay in filing a disclaimer, the patent in suit and each and every claim thereof is void.

XI

As a further defense defendants allege that the Letters Patent in suit, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, are null and void because the purported patentees of the patent in suit did not present or solicit said claims until long after the subject matter thereof had been in public use; that the purported inventions described and claimed in said patent are not a part of the original invention, if any, made by Cole and McLaren, and that the claims in suit herein were introduced long after public use and knowledge of the [53] substance thereof, in an attempt to enlarge the scope of their patent application to appropriate that which had in the meantime come into public use.

XII

As a separate defense, defendants allege that two presses of the same type and make, alleged to infringe

claims 4, 31, 32, 33, 34, 36, 38 and 39, were manufactured long prior to the issuance of the patent in suit, long prior to the solicitation of the claims which plaintiffs now aver are infringed, and not in infringement of any Letters Patent; that the said two presses were used by the prior owner thereof in the compression of carbon dioxide snow into blocks, and the construction and mode of operation of said presses were open and notorious and known to plaintiffs, their agents, officers, attorneys and affiliates long prior to the issuance of the patent in suit and prior to the solicitation and allowance of the claims now in suit herein; that plaintiffs did not notify the prior owner of said presses at any time and did not allege or contend that said presses or their use was in violation of the patent in suit herein or any other purported rights of plaintiffs, but on the contrary, acquiesced in and consented to the continued use of the presses by the prior owner thereof; that plaintiffs' failure to notify the prior owner of said presses was unreasonable and lulled the prior owner of said presses into a sense of security; that the defendants, believing in good faith that plaintiffs had no rights which could be violated or were violated by said presses, their construction and their operation, and relying upon plaintiffs' acquiescence to the continued use of said presses, purchased said presses from the prior owner thereof, made large investments in connection with the business in which said presses were employed, and otherwise changed defendants' position; that plaintiffs enlarged the scope of the Cole and McLaren application as filed so as to appropriate [54] that which had been previously

freely used by the defendants and the prior owner of said presses; that this present action was brought against the defendants without notice and that the aforesaid and other surrounding circumstances constitute laches on the part of the plaintiffs and prejudicial to these defendants, and that plaintiffs are not entitled to injunctive relief and are estopped from pressing this suit for infringement, accounting, damages or costs.

XIII

Defendants further allege that Cole and McLaren, the purported inventors of the patent in suit, were not the true, original and joint inventors of the matters there described and claimed but instead surreptitiously and unjustly obtained the patent in suit for that which was in fact invented by James W. Martin, Gustave T. Reich and others who were using reasonable diligence in adapting and perfecting the same; that plaintiffs and those acting in concert therewith and pursuant to a premeditated attempt to unlawfully extend their patent monopoly, contrary to the public interest, suppressed and concealed the earlier invention made by James W. Martin, to the detriment of the public and these defendants, and that by reason of such surreptitious and unjust acts, the patent in suit is void and plaintiffs are barred from prosecuting this action or from any relief whatsoever.

XIV

That said Letters Patent No. 2,025,698 in suit are invalid and that plaintiffs can not maintain this suit for infringement of any part of said patent, or recover costs

herein by reason of the fact that plaintiffs come into this court with unclean hands, because plaintiffs, in derogation of the public interest and defendants' rights and in contravention to the letter and spirit of the patent law and the Constitution of the United States and public policy, have attempted to extend this patent [55] grant beyond the legal term of seventeen years as provided by law, by suppressing and concealing earlier and other inventions pertaining to the same subject matter and by securing the grant of a succession of United States Letters Patent upon the same alleged invention, such succession of patents including:

- No. 1,546,681 issued July 21, 1925 to Thomas B. Slate and expired July 21, 1942, entitled "Method and Apparatus for Producing Carbon Dioxide Snow";
- No. 1,546,682 issued July 21, 1925 to Thomas B. Slate and expired July 21, 1942, entitled "Method and Apparatus for Producing Carbon Dioxide Snow and for Separating Same From the Gas";
- No. 1,659,431 issued February 14, 1928 to Walter S. Josephson, entitled "Carbon Dioxide Freezing Apparatus, Method, and Product";
- No. 1,659,434 issued February 14, 1928 to James W. Martin, Jr., entitled "Apparatus for Solidifying Carbon Dioxide";
- No. 1,659,435 issued February 14, 1928 to James W. Martin, Jr., entitled "Method of and

Apparatus for Making Carbon Dioxide Snow”;

No. 1,735,094 issued November 12, 1929 to Thomas B. Slate, entitled “Method and Means for Making Carbon Dioxide Snow”;

No. 1,795,772 issued March 10, 1931 to Justus C. Goosmann, entitled “Dual Effect Compression Method and Apparatus for Producing Carbon Dioxide Snow”;

No. 1,814,195 issued July 14, 1931 to Norman M. Thomas, entitled “Apparatus for Making Carbon Dioxide Ice”; [56]

No. 1,818,816 issued August 11, 1931 to Hans Ruffer et al, entitled “Process and Apparatus for Obtaining Dense Carbon Dioxide Snow directly from Liquid Carbon Dioxide”;

No. 1,843,397 issued February 2, 1932 to David A. Marcus et al, entitled “Device for Forming and Storing Solid Carbon Dioxide”;

No. 1,870,691 issued August 9, 1932 to Robert R. Rust et al, entitled “Method of and Apparatus for Making and Shaping Solid Carbon Dioxide”;

No. 1,873,418 issued August 23, 1932 to Charles L. Jones, entitled “Method and Apparatus for Making Dry Carbon Dioxide Products”;

and many other patents, thereby attempting to provide the plaintiffs with a continuously extending monopoly upon the same alleged invention.

XV

Defendants are informed and believe and therefore allege that while the application for Letters Patent No. 2,025,698 was pending in the United States Patent Office, the purported inventors thereof, Harry W. Cole and Malcolm W. McLaren, so limited and confined the claims of said application in view of the prior knowledge and published art and represented to the Patent Office officials such limited construction and meaning to the claims that the plaintiffs herein can not now seek for or obtain construction for such claims sufficiently broad to cover any apparatus or method made or used by these defendants.

XVI

As another and further defense, defendants allege that the Letters Patent No. 2,025,698 in suit are void, invalid and of no effect because the matters purported to be described and claimed in said Letters Patent were not the joint invention [57] of said Harry W. Cole and Malcolm W. McLaren. Defendants allege on information and belief that Malcolm W. McLaren was the sole inventor of the subject matter purportedly described and claimed in the Letters Patent in suit and that the plaintiffs herein, having full knowledge that said Harry W. Cole was not the joint inventor with said Malcolm W. McLaren of the subject matter allegedly described and claimed in the patent in suit herein, failed to withdraw the said Harry W. Cole as a purported inventor and now have no right to recover damages and costs or either of them and that by

reason of such failure, neglect and delay in withdrawing the said Harry W. Cole, the patent in suit is void. [58]

* * * * * * * *

Wherefore defendants pray:

1. That patent No. 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, be held invalid, null and void.

2. That a judgment and decree be entered denying the plaintiffs injunctive relief, or any relief whatsoever, and holding that the machines and presses owned and operated by the defendants and the modes of operation performed by defendants, and each of them, are not in infringement of said Letters Patent or any and all claims thereof.

3. That a judgment and decree be entered holding that the plaintiffs have used the purported patent rights contrary to the public interest and to the damage and injury of these defendants, and awarding such damages to defendants as to the Court may seem meet.

* * * * * * * *

6. That the plaintiffs' complaint be dismissed, costs be assessed against the plaintiffs, and such further relief granted these defendants as to the Court may seem just.

HOWARD BURRELL
1175 Subway Term. Bldg.
Los Angeles, Calif.

C. A. MIKETTA
210 W. 7th Street
Los Angeles, Calif.

Attorneys for Defendants

[Endorsed]: Filed Mar. 27, 1944. [59]

[Title of District Court and Cause.]

FIRST ANSWER OF GEORGE PEPPERDINE
FOUNDATION TO FURTHER AMENDED
AND SUPPLEMENTAL COMPLAINT

Defendant George Pepperdine Foundation, for its answer to the Further Amended and Supplemental Complaint, admits, denies, and alleges as follows:

I.

Answering Paragraph I of the Further Amended and Supplemental Complaint, this answering Defendant states that it is without knowledge or information sufficient to form a belief as to the truth of the averment that each of the Plaintiffs, International Carbonic Engineering Company and International Carbonic, Inc., is, or either of them is, a corporation organized or existing under the laws of the State of Delaware or any other state; admits that [60] Defendant Natural Carbonic Products, Inc. was a corporation organized and existing under the laws of the State of California; admits that Defendant George Pepperdine Foundation is a corporation organized and existing under the laws of the State of California; admits that it is informed and believes that Defendants L. H. Polderman, W. L. Benson, and C. B. Benson, and each of them, are residents of the Southern District of California and are carrying on business as a copartnership under the name and style of Natural Carbonic Products; and denies each and every of the other allegations of said paragraph.

II.

Answering Paragraph II of the Further Amended and Supplemental Complaint, this answering Defendant admits that this Court has jurisdiction over cases arising under the Patent Statutes of the United States; and alleges that Plaintiffs are barred from prosecuting this action and from any of the relief sought by said Further Amended and Supplemental Complaint, because they do not, and neither of them does, come into Court with clean hands, but instead Plaintiffs are, and each of them is, employing the process of the Court in a wrongful attempt to unlawfully extend purported patent monopolies to cover unpatented commodities adversely to public policy and interest and contrary to law.

III.

Answering Paragraph III of the Further Amended and Supplemental Complaint, this answering Defendant admits that United States Letters Patent No. 2,025,698 were issued on December 24, 1935, to International Carbonic Engineering Company; and denies each and every of the other allegations of said paragraph. [61]

IV.

Answering Paragraph IV of the Further Amended and Supplemental Complaint, this answering Defendant admits that prior to about July 1, 1943, it was the owner of some of the issued stock of Defendant Natural Carbonic Products, Inc.; denies that it was at any time the owner of more than approximately Sixty-six Per Cent (66%) of such issued stock; admits that on or about

July 1, 1943, it acquired all of the assets of Defendant Natural Carbonic Products, Inc. in consideration of the discharge of indebtedness of Natural Carbonic Products, Inc. to this answering Defendant of a total amount in excess of the value of such assets, which indebtedness this answering Defendant alleges upon information and belief Natural Carbonic Products, Inc. was unable to discharge in any other manner; admits that thereafter Defendant Natural Carbonic Products, Inc. was dissolved pursuant to the laws of the State of California; admits that said dissolution became effective October 25, 1943; admits that it acquired as part of the assets of Defendant Natural Carbonic Products, Inc. properties near Niland, California, whereon gas solidifying devices and apparatus employed by Defendant Natural Carbonic Products, Inc. were and are located; admits that on June 30, 1943, it leased said properties near Niland, California, including such gas solidifying devices and apparatus to Defendant L. H. Polderman; admits that Defendants W. L. Benson and C. B. Benson are nephews of Defendant L. H. Polderman; states that it is without knowledge or information sufficient to form a belief as to the truth of the averment that Defendants W. L. Benson and C. B. Benson, or either of them, acquired any interest in said lease; admits that it has known that Defendant L. H. Polderman has operated gas solidifying apparatus and devices upon said properties near Niland, California, from on or about July 1, 1943, that Defendant W. L. Benson and C. B. Benson have assisted Defendant L. H. Polderman in such operation, and it [62] has consented to such

operation; admits that it receives a consideration for said lease to Defendant L. H. Polderman, a part of which is based on the net profits received by Defendant L. H. Polderman; admits that the Defendants L. H. Polderman, W. L. Benson, and C. B. Benson were connected and associated with Defendant Natural Carbonic Products, Inc. prior to on or about July 1, 1943, and that Defendant L. H. Polderman managed and directed the activities of such corporation; admits that it leased such properties near Niland, California, and the gas solidifying apparatus and devices thereon to Defendant L. H. Polderman with the knowledge that Defendant L. H. Polderman would use such apparatus and devices and that Defendant W. L. Benson and C. B. Benson would probably assist him in such use; and denies each and every of the other allegations of said paragraph.

V.

Answering Paragraph V of the Further Amended and Supplemental Complaint, this answering Defendant admits that Plaintiffs do not themselves, and neither of them does itself, manufacture or sell devices or gas solidifying apparatus; and states that it is without knowledge or information sufficient to form a belief as to the truth of each and every of the other averments of said paragraph.

And as further and affirmative defenses this answering Defendant alleges as follows:

VI.

This answering Defendant alleges that the alleged invention or discovery claimed in said Letters Patent No.

2,025,698 was not patentable to the alleged inventors named therein under the provisions of R. S. 4886. 35 U. S. C. 31, and that therefore [63] said patent is, and each of the claims is, and particularly claims 4, 31, 32, 33, 34, 36, 38, and 39 are, invalid and void, because:

(a) Said alleged inventors, Harry W. Cole and Malcolm W. McLaren were not the original or first inventors of the alleged invention or discovery claimed in said Letters Patent or any material or substantial part thereof, but on the contrary the thing or things alleged to be patented by said Letters Patent and all substantial and material parts thereof were (if any invention or discovery were required), prior to the date of the alleged invention or discovery by the applicants for said Letters Patent invented or discovered by others, and more particularly those others identified in the following list and the applicants for those patents identified in the following list:

(b) The thing or things alleged to be patented by said Letters Patent and all material and substantial parts thereof were patented and described in printed publications in this or a foreign country before their alleged invention or discovery thereof or more than two years prior to the date of application for said Letters Patent, and more particularly the patents and publications identified in the following list;

(c) The thing or things alleged to be patented by said Letters Patent and all material and substantial parts thereof were known and used by others in this country before said alleged 'inventors' alleged invention or discovery thereof, and more particularly by those others identified

in the following list and the inventors named in the patents identified in the following list and the assignees named in said patents and by the authors of the articles appearing in the publications designated in the following list, residing at the addresses stated in said patents and publications; and

(d) The thing or things alleged to be patent by said Letters Patent and all material and substantial parts thereof [64] were in public use and on sale in this country for more than two years prior to the date of application for said Letters Patent, and more particularly by those identified in the following list and by the applicants for and the patentees of the patents and the authors of the publications hereinafter listed, residing at the addresses stated in said patents and publications:

United States Patents:

338,034	Mar. 16, 1886	J. P. F. Cartier
467,783	Jan. 26, 1892	David A. Sailor
530,526	Dec. 11, 1894	Daniel L. Holden
533,871	Feb. 12, 1895	D. Drummond
579,866	Mar. 30, 1897	Herbert S. Elworthy
760,191	May 17, 1904	Edward L. Gaylord
876,352	Jan. 14, 1908	Daniel L. Holden
955,454	Apr. 19, 1910	William J. Fleming
1,004,214	Sept. 26, 1911	Joseph Stehlin
1,018,568	Feb. 27, 1912	Harry P. Julius
1,054,772	Mar. 4, 1913	Daniel L. Holden
1,104,920	July 28, 1914	W. S. Osborne
1,288,255	Dec. 17, 1918	L. Stastney
1,350,247	Aug. 17, 1920	R. W. G. Stutzke
1,520,936	Dec. 30, 1924	James H. Dennedy

1,613,362	Jan. 4, 1927	Samuel E. Sheppard et al
1,631,037	May 31, 1927	William B. Kochenderfer
1,643,590	Sept. 27, 1927	Thomas B. Slate
1,659,431	Feb. 14, 1928	W. S. Josephson
1,659,434	Feb. 14, 1928	J. W. Martin
1,659,435	Feb. 14, 1928	J. W. Martin
1,726,373	Aug. 27, 1929	M. G. Voightlander
1,760,953	June 3, 1930	James W. Martin
1,822,788	Sept. 8, 1931	Josef Stoffels [65]
1,887,692	Nov. 15, 1932	James W. Martin
1,887,693	Nov. 15, 1932	James W. Martin

German Patents:

130,647	1902	Schmitz
142,704	1903	Diamanti
154,333	1904	Ver. Masch. fabr.
209,223	1909	Kern

French Patent:

246,808	Aug. 12, 1895	Henderson
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British Patents:

13,684	Aug. 13, 1891	C. R. C. Tichborne et al
7,436	Apr. 11, 1895	H. S. Elworthy
2,450	Jan. 31, 1906	E. G. Elworthy
237,681	1925	Slate
263,922	1927	Haynes
294,584	July 26, 1927	W. Heseling
294,614	July 26, 1927	W. Heseling

Publication:

New Apparatus for Making Carbonic Acid Snow
Compts. Rendu year 1884 (99,235)

This answering Defendant asks leave to amend this answer to include other persons and corporations, patents and publications as soon as they are ascertained.

VII.

This answering Defendant alleges that each of the claims of the patent in suit, and particularly claims 4, 31, 32, 33, 34, 36, 38, and 39, is invalid and void because: [66]

(a) The alleged invention defined thereby is not in fact an invention or combination but is a mere aggregation of old elements or steps;

(b) Said claims, and each of them, do not comply with R. S. 4888, 35 U. S. C. 33, in that they do not, and none of them does, distinctly claim the part, improvement, or combination which the applicants claim as their invention or discovery, but on the contrary said claims, and each of them, attempt to patent a function or result;

(c) Said claims, and each of them, attempt to patent natural laws, functions, and operations not the statutory subject of invention and not any new or useful art, machine, manufacture, or composition of matter within the statutes in such case made and provided; and

(d) The Commissioner of Patents did not cause a proper examination to be made as to the alleged new invention or discovery defined by said claims and each of them, and, had such an examination been made properly, it would have appeared that the applicants for said Letters Patent were not entitled thereto, and said Letters Patent would not have been issued, and said Commissioner

exceeded his legal authority in granting and issuing said Letters Patent, and said Letters Patent were inadvertently issued.

VIII.

This answering Defendant alleges that each of the claims of the patent in suit, and particularly claims 4, 31, 32, 33, 34, 36, 38, and 39, is invalid and void because the alleged invention or discovery purportedly described and claimed in said patent was merely the result of the exercise of the ordinary faculties of reasoning aided by the special knowledge and the facility of manipulation which are acquired through habitual and intelligent practice of the art and was not the result of that inventive faculty which [67] it is the purpose of the Constitution and patent laws to encourage and reward and involved nothing more than the exercise of mere mechanical skill in view of the state of the art as known at the time of and long prior to the alleged invention or discovery thereof by the applicants for said Letters Patent, said state of the art including the prior patents and publications listed in Paragraph VI hereof.

IX.

This answering Defendant alleges that each of the claims of the patent in suit, and particularly claims 4, 31, 32, 33, 34, 36, 38, and 39, is invalid and void because the specification and claims do not comply with R. S. 4888, 35 U. S. C. 33, in that they do not describe the alleged invention or discovery in such full, clear, concise, and exact terms as to enable any person skilled in the

art or science to which it appertains or with which it is most nearly connected to make, construct, compound, or use the same, and in that they fail to explain the best mode in which the applicants contemplated applying the principle of their alleged invention or discovery so as to distinguish it from other inventions, and in that the claims do not, and none of them does, particularly point out or distinctly claim the part, improvement, or combination which the applicants claimed as their invention or discovery.

X.

This answering Defendant alleges that each of the claims of the patent in suit, and particularly claims 4, 31, 32, 33, 34, 36, 38, and 39, is invalid and void because for the purpose of deceiving the public the description and specification filed by Malcolm W. McLaren and Harry W. Cole were made to contain less than the whole truth relative to their alleged invention and more than [68] was necessary to produce the desired effect; because the patentees and the Plaintiffs, and each of them, knew for many years long past and prior to September 3, 1942, that the patent in suit was defective and inoperative, and that each of the claims thereof was invalid and void and included more than the patentees had a right to claim, and that said patentees had included in the claims of the patent inoperative means and gases with deceptive intent; and because Plaintiffs and the patentees have, and each of them has, failed to apply for a reissue patent and failed to file a disclaimer in the manner provided by law, and Plaintiffs and the patentees have, and each of them has,

purposely refrained from applying for a reissue and filing a disclaimer in an attempt to extend the alleged monopoly of the patent in suit to cover more than the patentees had a right to claim and to cover unpatented commodities pursuant to the plan of a conspiracy between the Plaintiffs and contrary to public policy, public interest, and law.

XI.

This answering Defendant alleges that each of the claims of the patent in suit, and particularly claims 4, 31, 32, 33, 34, 36, 38, and 39, is invalid and void because the patentees of the patent in suit did not present to the Patent Office or solicit from the Patent Office the allowance of said claims or any of them until long after the subject matter thereof had been the subject of public use and knowledge; because the alleged invention described and attempted to be covered in said claims, and each of them, was not a part of the original invention made by the applicants for the patent in suit, if any invention were made by them; and because said claims, and each of them, were first introduced into the application for the patent in suit and their allowance by the Patent Office was first sought long after public use and knowledge of the subject matter thereof in an attempt to enlarge the scope of the [69] patent in suit to appropriate that which had come into public use, become the subject of knowledge and use by others, and become a part of the public domain.

XII.

This answering Defendant alleges on information and belief that two presses of the same type and make alleged

to infringe claims 4, 31, 32, 33, 34, 36, 38, and 39 of the patent in suit were manufactured long prior to the issuance of the patent in suit and long prior to the first presentation to the Patent Office and solicitation of allowance by the Patent Office of said claims and each of them; that the said two presses were used by a prior owner thereof in the compression of carbon dioxide snow into blocks, and both the construction and mode of operation of said presses, and each of them, were fully known to Plaintiffs, and each of them, and their agents, officers, attorneys, and affiliates long prior to the issuance of the patent in suit and prior to the first presentation to the Patent Office and first solicitation of the allowance by the Patent Office of said claims, and each of them; that Plaintiffs did not, and neither of them did, notify or allege or contend to the prior owner of said presses at any time that said presses, or either of them, or their use was in violation or infringement of the patent in suit herein, or any of the claims thereof, or was in violation of any right of Plaintiffs, or either of them, but on the contrary Plaintiffs, and each of them, acquiesced in and consented to the continued use of said presses, and each of them, by the prior owner thereof; that the failure of the Plaintiffs, and each of them, to notify the prior owner of said presses of the claim of infringement asserted in the Further Amended and Supplemental Complaint was unreasonable and lulled the prior owner of said presses into a sense of security and a conviction that the construction and operation of said presses, [70] and each of them, were not a violation or infringement of any patent of the Plaintiffs, or either of them; that some of the Defendants, believing in good faith that Plaintiffs had no patents or other rights which could be or were violated or infringed by said presses, or either of them, or their operation, and in reliance

upon the acquiescence of the Plaintiffs, and each of them, to the continued use of said presses, and each of them, purchased said presses from said prior owner thereof, made large investments in connection with the business in which said presses were employed, and in other respects changed their position; that Plaintiffs enlarged the scope of the patent in suit as filed in an attempt to appropriate that which had been previously freely used by such Defendants and the prior owner of said presses; and that Plaintiffs are, and each of them is, thereby estopped to maintain, and guilty of such laches as constitute a bar to the maintenance of, this suit, and estopped to recover or secure, and barred from, the recovery and securing of any damages and any other relief sought by Plaintiffs.

XIII.

This answering Defendant alleges upon information and belief that Harry W. Cole and Malcolm W. McLaren, the purported inventors of the patent in suit, were not the true, original, and joint inventors of the matters there described and claimed but instead surreptitiously and unjustly obtained the patent in suit for that which was in fact invented by James W. Martin, Gustave T. Reich, and others who were using reasonable diligence in adapting and perfecting the same; that Plaintiffs and those acting in concert therewith and pursuant to a premeditated attempt to unlawfully extend their patent monopoly, contrary to the public interest, suppressed and concealed the earlier invention made by James W. Martin, to the detriment of the public and the Defendants; and that by reason of such surreptitious and unjust acts the patent in [71] suit is void, and Plaintiffs are barred from prosecuting this action and from any relief whatsoever.

XIV.

This answering Defendant alleges upon information and belief that the patent in suit, and each of the claims thereof, and particularly claims 4, 31, 32, 33, 34, 36, 38, and 39, is invalid and void and that Plaintiffs cannot maintain this suit or recover costs herein because, as this Defendant is informed and believes and therefore alleges, Plaintiffs come into this Court with unclean hands, because Plaintiffs, in derogation of the public interest and Defendant's rights and in contravention to the letter and spirit of the patent law and the Constitution of the United States and public policy, have attempted to extend this patent grant beyond the legal term of seventeen years as provided by law, by suppressing and concealing earlier and other inventions pertaining to the same subject matter, and by securing the grant of a succession of United States Letters Patent upon the same alleged invention, such succession of patents including:

No. 1,546,681 issued July 21, 1925, to Thomas B. Slate and expired July 21, 1942, entitled "Method and Apparatus for Producing Carbon Dioxide Snow":

No. 1,546,682 issued July 21, 1925, to Thomas B. Slate and expired July 21, 1942, entitled "Method and Apparatus for Producing Carbon Dioxide Snow and for Separating same From the Gas":

No. 1,659,431 issued February 14, 1928, to Walter S. Josephson, entitled "Carbon Dioxide Freezing Apparatus, Method, and Product":

No. 1,659,434 issued February 14, 1928, to James W. Martin, Jr., [72] entitled "Apparatus for Solidifying Carbon Dioxide":

- No. 1,659,435 issued February 14, 1928, to James W. Martin, Jr., entitled "Method of and Apparatus for Making Carbon Dioxide Snow";
- No. 1,735,094 issued November 12, 1929, to Thomas B. Slate, entitled "Method and Means for Making Carbon Dioxide Snow";
- No. 1,795,772 issued March 10, 1931, to Justus C. Goosmann, entitled "Dual Effect Compression Method and Apparatus for Producing Carbon Dioxide Snow";
- No. 1,814,195 issued July 14, 1931, to Norman M. Thomas, entitled "Apparatus for Making Carbon Dioxide Ice";
- No. 1,818,816 issued August 11, 1931, to Hans Rufener et al., entitled "Process and Apparatus for Obtaining Dense Carbon Dioxide Snow Directly From Liquid Carbon Dioxide";
- No. 1,843,397 issued February 2, 1932, to David A. Marcus et al, entitled "Device for Forming and Storing Solid Carbon Dioxide";
- No. 1,870,691 issued August 9, 1932, to Robert R. Rust, et al, entitled "Method of and Apparatus for Making and Shaping Solid Carbon Dioxide";
- No. 1,873,418 issued August 23, 1932, to Charles L. Jones, entitled "Method and Apparatus for Making Dry Carbon Dioxide Products";

and many other patents, thereby attempting to provide the Plaintiffs with a continuously extending monopoly upon the same alleged invention. [73]

XV.

This answering Defendant is informed and believes and therefore alleges that, while the application for Letters Patent No. 2,025,698 was pending in the United States Patent Office, the purported inventors thereof, Harry W. Cole and Malcolm W. McLaren, so limited and confined the claims of said application in view of the prior knowledge and published art and represented to the Patent Office officials such limited construction and meaning to the claims that the Plaintiffs herein cannot now seek for or obtain construction for such claims sufficiently broad to cover any apparatus or method made or used by any Defendant.

XVI.

This answering Defendant alleges that the patent in suit, and each of the claims thereof, and particularly claims 4, 31, 32, 33, 34, 36, 38, and 39, is invalid and void because as this Defendant is informed and believes and therefore alleges, the matters purporting to be covered by said claims were not the joint invention of the applicants for said patent but were the sole invention of Malcolm W. McLaren; and because Plaintiffs, and each of them, having full knowledge that Harry W. Cole was not a joint inventor of the subject matter purported to be claimed by said claims failed to withdraw the said Harry W. Cole as a purported inventor.

XVII.

Further answering, this Defendant denies that it has infringed, either directly or contributorily, any claim or claims of any patent owned by the Plaintiffs, or either of them, or in which the Plaintiffs, or either of them, have any right, title, or interest, and denies that it has done any act or thing invading any right of any nature whatsoever of the Plaintiffs, or either of them. [74]

Wherefore, Defendant prays:

(1) That patent No. 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38, and 39 thereof, be held invalid, null, and void.

(2) That a judgment and decree be entered denying the Plaintiffs injunctive relief and any relief whatsoever and holding that this Defendant is not infringing and has not infringed any claims of the patent in suit.

(3) That a judgment and decree be entered holding that the Plaintiffs have used the purported patent rights contrary to the public interest and to the damage and injury of Defendant, and awarding such damages to Defendant as to the Court may seem proper.

* * * * *

(6) That the Further Amended and Supplemental Complaint be dismissed with costs to this Defendant, and that this Defendant have such other and further relief as to this Court may seem just.

Dated: At Los Angeles, California, this 30th day of March, 1944.

HARRIS, KIECH, FOSTER & HARRIS

By Ward D. Foster

Attorneys for Defendant George Pepperdine
Foundation.

Ford W. Harris

Clarence F. Kiech

Ward D. Foster

Ford Harris, Jr.

Of Counsel.

[Endorsed]: Filed Apr. 3, 1944. [75]

[Title of District Court and Cause.]

STIPULATION RE PATENTS

NOS. 1,546,681 1,546,682

It Is Hereby Stipulated, by and between all of the parties to the above entitled cause, through their respective attorneys, that the following patents shall, for all of the purposes of this trial, be considered as pleaded in the lists of patents in Paragraph VI of First Answer of George Pepperdine Foundation to Further Amended and Supplemental Complaint and in Paragraph VI of First and Amended Answer [of the other Defendants] to Further Amended Complaint as of the dates of service of such answers:

United States Patents: [76]

1,546,681	July 21, 1925	Thomas B. Slate
1,546,682	July 21, 1925	Thomas B. Slate

Dated: At Los Angeles, California, this 19th day of April, 1944.

HARRIS, KIECH, FOSTER & HARRIS

By Ward D. Foster

Attorneys for Defendant George Pepperdine
Foundation

C. A. Miketta

CASIMIR A. MIKETTA

Attorney for Remaining Defendants.

LYON & LYON

By R. E. Caughey

Attorneys for Plaintiffs.

[Endorsed]: Filed Apr. 27, 1944. [77]

[Title of District Court and Cause.]

NOTICE TO PLAINTIFFS RE CORRECTIONS TO
ANSWERS TO PLAINTIFFS INTERROGA-
TORIES

L. H. Polderman, former President of Natural Carbonic Products, Inc., on behalf of defendants Natural Carbonic Products Inc., L. H. Polderman, W. L. Benson and C. B. Benson, individually and as a copartnership Natural Carbonic Products, states:

That the further answers to plaintiffs' interrogatories verified by him on May 29, 1943, have been reviewed in the light of plaintiffs' refusal to state what is meant by a "closed chamber" (defendants' request for admissions No. 33 and answer thereto) and, in order to prevent any misunderstanding the following amplification and correction is made to defendants' answers to [78] plaintiffs' interrogatories:

All interrogatories referring to a closed chamber or a closing head, or a head in chamber closing position, such as Interrogatory 38, and answers thereto, should be read and understood in the light of Interrogatory 23 and the answer thereto, wherein it is stated that gas is permitted to escape from the chamber of each press while such chamber is supplied with liquid carbon dioxide and during the period of solidification.

That the interrogatories and the answers thereto should be read and understood to mean that defendants have not at any time employed a closed chamber, this last phrase

meaning a chamber without an opening through which gas may and does pass.

That answer 20 (b) to plaintiffs' interrogatories may be amplified in order to make it more understandable in the light of Interrogatory 25. Interrogatory 25 reads as follows:

"(25). Which of said chambers is substantially closed to the atmosphere during the pressing stroke of the ram or plunger?"

Answer 25 reads as follows:

"25. None of them."

Answer 20 (b), in amplified form, is given herewith:

"20 - (b). Defendant does not understand this interrogatory but volunteers the following: After the valve admitting liquid carbon dioxide is shut off manually, the pressure in the chamber starts dropping and when the pressure is below 25 pounds gauge and sometimes when the pressure is closed to atmospheric, an air vent or valved opening to the atmosphere is opened while the blow back line or return line connecting the chamber with the rest of the system is closed, the opening of the air vent to the atmosphere permitting the gas remaining in the chamber to blow off to the atmosphere. The platens and rams are then manually operated as stated in [79] Interrogatory 19. Defendant does not know what specific pressure exists in the snow while it is being compressed into a block but believes that the pressure is not above atmospheric because during the actual compression of the snow the lower platen is in a lowered position whereby additional gas escapes around the lower end of the chamber."

The answer to Interrogatory 13 should be changed to more correctly state:

“(13). To the best of our understanding of this interrogatory, the compressing plunger ejects the block of solid carbon dioxide from each of the Frick presses; in the HPM press the compressing plunger does not eject the compressed block of carbon dioxide.”

The answer to Interrogatory 39 may be amplified by the addition of the following:

“In the HPM press the lower platen drops under the influence of gravity and is not driven or positively moved by mechanical means to a lowered position.”

That blue prints exhibits 9 and 10 filed October 20, 1942, should show an air vent leading from and communicating with each of the chambers, such air vent placing said chambers in communication with the atmosphere. That the blue print referring to the HPM press should be corrected to show that the scale is $1\text{-}1/2$ inches = 1 foot instead of $1/2$ inch = 1 foot. That the same blue print should show that the lower platen, on the corrected scale is about $1\text{-}3/4$ inches high; that the snow chamber to the corrected scale should be 20 inches wide, the lower platen being about $3/16$ inch smaller so as to easily move into the lower end of the snow chamber.

Blue prints including these corrections are attached hereto and marked exhibits A and B. Deponent states, on information and belief that copies of the appended corrected blueprints were discussed and left [80] with

plaintiffs' counsel on April 12, 1944, at which time plaintiffs' counsel did not refuse to accept said corrected prints in lieu of Exhibits 9 and 10 hereinabove referred to; that on Monday, April 24, 1944, plaintiffs' counsel refused to stipulate that said prints truly and accurately represented defendants' presses.

Deponent, on information and belief, states that the diagrams, Exhibits C, D, E and F attached hereto, were submitted to plaintiffs' counsel on April 12, 1944; deponent states that said diagrams correctly represent the various successive operations of the HPM press of the defendants and the relative positions of the parts of such press; deponent states that the defendants' operations of its Frick presses are no different from the operation of its HPM press. Deponent states, on information and belief, that on April 12, 1944, plaintiffs' counsel did not refuse to stipulate as to the said exhibits C, D, E and F, but did refuse to stipulate to such exhibits on April 24, 1944.

L. H. POLDERMAN

[Verified.] [81]

[Title of District Court and Cause.]

NOTICE TO PLAINTIFFS BY DEFENDANTS RE
PRIOR ART TO BE RELIED UPON

For the purpose of facilitating Plaintiffs' preparation for trial, Defendants, and each of them, hereby notify the Plaintiffs, and each of them, that it is the present intention of Defendants not to rely upon the following patents pleaded in their answers to the Further and Amended Supplemental Complaint:

United States Patents:

1,004,214	Sept. 26, 1911	Joseph Stehlin
1,613,362	Jan. 4, 1927	Samuel E. Sheppard, et al
1,760,953	June 3, 1930	James W. Martin [89]

French Patent:

246,808 Aug. 12, 1895 Henderson

Dated: At Los Angeles, California, this 12th day of April, 1944.

HARRIS, KIECH, FOSTER & HARRIS

By Ward D. Foster

Attorneys for Defendant George Pepperdine
Foundation

C. A. Miketta

CASIMIR A. MIKETTA

Attorney for the Remaining Defendants.

[Endorsed]: Filed April 27, 1944. [90]

[Title of District Court and Cause.]

NOTICE TO PLAINTIFFS BY DEFENDANTS RE
PRIOR ART TO BE RELIED UPON

For the purpose of facilitating Plaintiffs' preparation for trial, Defendants, and each of them, hereby notify the Plaintiffs, and each of them, that it is the present intention of Defendants not to rely upon the following patents pleaded in their answers to the Further and Amended Supplemental Complaint:

United States Patents:

579,866	Mar. 30, 1897	Herbert S. Elworthy	
1,350,247	Aug. 17, 1920	R. W. G. Stutzke	
1,520,936	Dec. 30, 1924	James H. Dennedy	
1,887,693	Nov. 15, 1932	James W. Martin	[91]

British Patent:

2,450	Jan. 31, 1906	E. G. Elworthy
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German Patents:

130,647	1902	Schmitz
142,704	1903	Diamanti
154,333	1904	Ver. Masch. fabr.
209,223	1909	Kern

It is the present intention of the Defendants to rely upon the following additional patents:

German Patent:

508,168	1928	Maschinenfabrik Eblingen
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Swiss Patent:

129,690	July 27, 1927	Hessling
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Dated: At Los Angeles, California, this 1st day of May, 1944.

HARRIS, KIECH, FOSTER & HARRIS
By Ward D. Foster

Attorneys for Defendant George Pepperdine
Foundation.

C. A. Miketta

CASIMIR A. MIKETTA

Attorney for the Remaining Defendants.

[Endorsed]: Filed May 2, 1944. [92]

[Title of District Court and Cause.]

ORDER

Defendants having made a verified showing in support of a Motion, heard in open Court during the trial of the above entitled cause, for leave to take depositions with respect to records of Eppenbach Inc., of Long Island City, New York, said records being relevant to the issues now before the Court:

It Is Hereby Ordered:

That defendants may take depositions of Edwin G. Eppenbach and other witnesses having knowledge of the facts with regard to records of Eppenbach, Inc., comprising defendants' Exhibit R for identification attached hereto, and such other records in the possession of Eppenbach, Inc., as are material to [95] the issue to which said Exhibit R pertains, said depositions to be taken before a Notary at New York or Long Island City, New York, and to be completed by June 6, 1944.

Defendants shall notify plaintiffs as to the precise place where and time when said depositions are to be taken, on or before June 1, 1944.

Dated: This 30th day of May, 1944.

RALPH E. JENNEY

United States District Judge

[Endorsed]: Filed May 30, 1944. [96]

[Minutes Saturday, July 15, 1944]

Present: The Honorable Ralph E. Jenney, District Judge.

This cause coming on for further trial; Leonard S. Lyon, Esq., appearing as counsel for plaintiffs; C. A. Miketta, Esq., appearing for Natural Carbonic Products, Inc., W. L. and C. B. Benson, and L. H. Polderman; Ward Foster, Esq., appearing for Geo. Pepperdine Foundation; H. A. Dewing and C. W. McClain, Court Reporters, being present and reporting the proceedings:

The Court renders opinion and decision. Judgment is for plaintiff on the counterclaim.

Court recesses at 11 A. M. and reconvenes at 11:10 A. M.; all present as before.

The Court resumes rendering decision. Each claim of the patent in suit is found invalid for lack of invention and the Court holds there is no infringement and orders judgment for defendants with costs, counsel for defendants to prepare and serve findings and conclusions and form of decree, and counsel for plaintiffs to do likewise on the counterclaim and submit same to defendants; both sides to have two weeks to prepare and submit documents and thereafter each side to have two weeks for objections. [99]

[Title of District Court and Cause.]

FINDINGS OF FACT AND CONCLUSIONS OF LAW

This cause coming before the Court for trial on final hearing and trial being had on twenty-one days, during which witnesses were heard, demonstrations had and observed by the Court, exhibits filed and considered, and briefs having been filed and oral argument had on two days, the Court having rendered its decision and being fully advised in the premises, does hereby make the following findings of fact and conclusions of law: [100]

Findings of Fact

1. Plaintiffs, International Carbonic Engineering Company (hereafter referred to as "Engineering") and International Carbonic, Inc. (hereinafter referred to as "International") are Delaware corporations in good standing.

2. Plaintiff Engineering is the owner of the legal title to the Cole and McLaren patent No. 2,025,698 in suit. Plaintiff International is the exclusive licensee thereunder with right to grant sublicenses, subject to outstanding licenses previously granted.

3. Prior to its dissolution in July 1943, defendant Natural Carbonic Products, Inc., a California corporation, was engaged in the manufacture of solid carbon dioxide at its plant at Niland, California. Defendant George Pepperdine Foundation, a California corporation, is the owner of the property upon which the plant is located and since July 1943, has leased such property to National Carbonic Products, a copartnership composed of the individual defendants L. H. Polderman, W. L. Ben-

son and C. B. Benson, residents of this district and engaged in the manufacture of solid carbon dioxide at said plant.

4. That prior to the trial of this action plaintiffs offered to the defendant Natural Carbonic Products, Inc. a license which plaintiffs had granted to others under a number of plaintiffs' patents, including the patent in suit, said license containing the provision that royalty was to be paid International on each ton of solid carbon dioxide manufactured by or for the licensee "whether or not such solid carbon dioxide has been manufactured in accordance with the methods, processes and apparatus of any one of the licensed patents." [101]

5. That it has not been satisfactorily proven and established that any license granted or offered by plaintiffs to others under plaintiffs' patents, including the patent in suit, contains any provisions constituting an unjust or unfair use of patent rights or contrary to public policy or that said plaintiffs in granting or offering said license attempted so to do.

6. That the license agreements heretofore granted or offered to others by plaintiffs, including the defendant Natural Carbonic Products, Inc., have been amended to provide for the payment of royalty by licensee "for each and every ton" of solid carbon dioxide manufactured by or for, "and sold or used hereunder by the licensee * * * having at the time of said sale a license from Licensor under the patents licensed hereunder."

7. That it has not been satisfactorily proven and established that the plaintiffs solely or acting with others have attempted to control or regulate the sales price at which solid carbon dioxide was sold by the defendants, or any of them.

8. That it has not been satisfactorily proven and established that the plaintiffs solely or acting with others have attempted to intimidate the defendant, Natural Carbonic Products, Inc., into concerted or any price changes with any alleged affiliates of said plaintiffs.

9. That it has not been satisfactorily proven and established that any notices relating to plaintiffs' patent sent or caused to be sent to the trade were sent in bad faith or for any other reason than to advise said trade of plaintiffs' rights thereunder. [102]

10. That it has not been satisfactorily proven and established that the plaintiffs solely or acting with others have interfered in any manner with the disposal or sale of carbon dioxide by independent manufacturers, including the defendant, Natural Carbonic Products, Inc.

11. That it has not been satisfactorily proven and established that the plaintiffs solely or acting with others by price cutting, or threats of litigation, or coercion, or intimidation, restricted or eliminated free competition in the manufacture, disposal or sale of carbon dioxide in liquid or solid form.

12. That it has not been satisfactorily proven and established that this action was brought against the defendants, or any of them, in bad faith or for any other purpose than to establish the question of validity and infringement of the patent in suit.

13. That it has not been satisfactorily proven and established that plaintiffs solely or acting with others have represented that defendants, or any of them, will not be able to supply their customers with solid carbon dioxide because plaintiffs are sole owners of methods and devices for the manufacture of said solid carbon dioxide.

14. That it has not been satisfactorily proven and established that defendants, or any of them, have suffered any loss or damage by reason of any alleged violations by plaintiffs of the Anti-Trust Laws of the United States or any alleged acts of unfair competition or by any other unlawful acts of plaintiffs alleged in said counterclaims, or either of them. [103]

15. The patent in suit, No. 2,025,698, was issued December 24, 1935 and names Cole and McLaren as the inventors and relates to improvements in gas solidifying apparatus. Defendants are charged with infringing claims 4, 31, 32, 33, 34, and 36 pertaining to a machine for making solid carbon dioxide, and claims 38 and 39 covering a method or process of making solid carbon dioxide. The specific machines charged with infringement consist of two Frick presses which make blocks of solid carbon dioxide measuring 10" x 10" x 10" and an HPM press which makes blocks measuring 20" x 20" x 10".

16. The patent in suit describes two forms of machines for making blocks of solidified carbon dioxide, one illustrated in Figs. 1, 2 and 3, and the other illustrated in Fig. 5. Both machines are to be used with a liquefying and pressure control system, shown in Fig. 1. The machine of Fig. 2 is a horizontal machine and that of Fig. 5 is a vertical machine. Both machines include the same structural elements and the relationship between those elements is identical in the two machines. Both machines perform the same function and produce the same result.

17. As filed, the application for the patent in suit was entitled "Snow Machine" and references were numerous to "snow". By amendment during the prosecution of the application, the words "solidified gas" were substituted for the word "snow". Nowhere in the application as filed or

in the patent as issued is any reference made to triple point ice or any of the specific conditions under which it may be produced.

No process claims were solicited in the application as filed. About seven years later, and more than two years after such operations were quite well known in the industry and in public use, the two method claims asserted by plaintiffs to cover such triple point operations were added by amendment dated November 18, 1935. [104]

Applicants attempted to secure the allowance of claims differing from those here in issue, in that they did not define the solidifying and compressing chamber as closed or gas-tight, and such claims were rejected upon the prior art and amended by the applicants.

Neither machine described in the patent in suit was knowingly operated to produce compressed blocks of triple point ice until after the filing of the application for the patent in suit.

18. The evidence establishes that J. W. Martin, while in the employ of Prest-Air Corporation, at New York and Maspeth, Long Island, during the first part of 1925, had constructed under his direction unitary machines for solidifying and pressing carbon dioxide into blocks; that said unitary Martin machines contained elements in the same relationship and with the same functions as required by the claims of the patent in suit.

19. The evidence establishes that the Martin unitary machines were openly, successfully and commercially used in manufacturing operations in this country and performed the same function, operated in the same manner by the performance of the same steps and obtained the same result as that attributed to the patent in suit, at least during the first part of 1925, and more than two years be-

fore application was made for the patent in suit; that Martin and his engineer, Hood, disclosed the construction and operation of the unitary Martin machines to McLaren at least as early as October 1926.

20. Plaintiffs' expert admitted there was nothing new or in the nature of an invention in the apparatus of Fig. 5 of [105] the patent in suit except the double jacket 102 and the dividing and separating members 110 or in the apparatus of Fig. 1 except the exhauster 81 and diaphragm valve 84.

21. The claims relied upon are vague and indefinite as to some of the factors controlling the construction and operation of the apparatus and the performance of the method, are functional as to some others, and totally silent as to others. The claims in issue are deficient in specifying those controlling factors necessary for the construction and operation of the apparatus and the performance of the method. The controlling factors and details are omitted from the specification and therefore the claims derive no assistance from the specification.

None of the claims in issue includes, as elements, the double jacket, the dividing and separating members, the exhauster, or the diaphragm valve. The claims in issue are not directed to the avoidance of tamping and therefore cover apparatus and methods in which tamping may or may not be performed.

22. Prior to the earliest date of invention asserted by plaintiffs for the subject matter of the patent in suit, there was known to men skilled in the art to which the patent in suit relates and to both Cole and McLaren an apparatus and method for the solidification of liquid carbon dioxide and its compression into blocks for commercial use which is referred to in the testimony as the

"snow tank apparatus and method." This snow tank apparatus and method was substantially as follows: The snow tank included a closed chamber with a liquid carbon dioxide inlet connected to the chamber and provided with a control valve and a carbon dioxide gas outlet connected to the chamber and provided with a control valve for removing the portion of the carbon dioxide which was not solidified in the chamber. This snow tank apparatus included a press comprising a chamber and a top and [106] bottom movable platen and hydraulic means for actuating the press. In the operation of the snow tank apparatus liquid carbon dioxide was delivered to the solidification chamber while the chamber was closed and unsolidified carbon dioxide was withdrawn through the gas outlet. In the operation of the solidification chamber of the snow tank apparatus the pressure in the chamber varied during the introduction of the liquid carbon dioxide, in some instances going above 30 pounds per square inch gauge, and, during the solidification of the carbon dioxide, the evolved carbon dioxide gas was withdrawn through the gas outlet and returned to the system. When the desired mass of solid carbon dioxide was accumulated in the chamber, the control valve in the liquid inlet line was shut off, and, when the pressure in the solidification chamber approached atmospheric pressure, the control valve in the gas outlet line was shut off. Thereafter the solid carbon dioxide was compressed in the pressing chamber, which was separated from and adjacent the solidification chamber, by hydraulically actuating both the top and bottom platens, so that pressure was exerted upon the solid carbon dioxide simultaneously from both top and bottom. During the compressing operation, the gaseous CO_2 in the solid CO_2 is permitted to escape to atmosphere.

23. Prior to the earliest date of conception asserted by plaintiffs for the invention of the patent in suit, there was known to, or readily determinable without invention by, a man skilled in the art to which such patent relates that carbon dioxide solid was an article of commerce since 1907; that solid carbon dioxide could be formed by discharging liquid carbon dioxide into an air-tight, gas-tight chamber and relieving the pressure thereon; that in order to accomplish such solidification it was necessary to withdraw carbon dioxide in gaseous form from the gas-tight chamber, [107] that at the triple point pressure of 60.4 pounds per square inch gauge carbon dioxide ice could be formed in such a chamber; that solid carbon dioxide was formed in such a chamber by the evaporation of the liquid and that the carbon dioxide could be compressed in the same chamber; that the temperature of the liquid carbon dioxide supplied to the snow chamber affected the yield of snow; that solid carbon dioxide so produced could be compressed into blocks as a commercial commodity; that it was necessary during such compression of solid carbon dioxide into blocks to permit the gas to escape in order to produce a stable block; that pressing a material from both the top and bottom increased the density of the product; that a commercial size of the block was 10 x 10 inches; and that it was not necessary to tamp triple point carbon dioxide before pressing it into blocks.

It was common practice in the prior art to press the carbon dioxide into blocks while permitting the escape of gas to the atmosphere. The proper thickness of walls to sustain the desired pressure, the volume of gas generated when the liquid carbon dioxide was introduced into the chamber, the relative size of the inlets and outlets to the

chamber, all were readily determinable without invention by a man skilled in the art.

Devices commonly known in the prior art included the proper type of nozzles or inlets to supply liquid carbon dioxide to the apparatus, exhausters of the type employed in the patent in suit and their method of installation and operation, devices for reducing the pressure to atmospheric pressure during pressing operations, laboratory devices for forming and compressing solidified carbon dioxide similar to those disclosed in the Fleming and Julius patents, presses including a chamber with a movable and removable head and a plunger capable of compressing material in the chamber against the head. The patent in suit lacks invention in view of the state of the art. [108]

24. The elements and steps of the claims of the patent in suit which relate to the solidification of carbon dioxide are entirely independent of and are performed independently of the elements and steps of the apparatus for compressing the material, and produce no new function or result.

25. Claims 38 and 39 do not define or include the solidification of carbon dioxide under triple point conditions.

26. The solidification of carbon dioxide and its compression into blocks are disclosed in the following prior art patents:

Flemming	955,454	1910
Julius	1,018,568	1912
Slate	1,546,681	1925
Slate	1,546,682	1925
Slate	1,643,590	1927
Josephson	1,659,431	1928

Martin		1,659,434	1928
Martin		1,659,435	1928
Martin		1,887,692	1932
Slate	Br.	237,681	1925
Elworthy	Br.	7,436	1895
Haynes	Br.	236,922	1927

27. A unitary apparatus in which both the solidification of carbon dioxide and its compression into blocks are performed is disclosed in the following prior art patents:

Martin		1,659,435	1928
Martin		1,887,692	1932
Julius		1,018,568	1912
Josephson		1,659,431	1928
[109]			
Slate		1,643,590	1927
Elworthy	Br.	7,436	1895
Slate	Br.	237,681	1925

28. Every element and step of the claims in issue with the mode of operation described in the patent in suit are disclosed in the following prior art patents:

Cartier		338,034	1886
Sailor		467,783	1892
Holden		530,526	1894
Holden		876,352	1908
Holden		1,054,772	1913
Drummond		533,871	1895
Gaylord		760,191	1904
Osborne		1,104,920	1914
Stastney		1,288,255	1918
Kochenderfer		1,631,037	1927
Voightlander		1,726,373	1929

29. Apparatus claims in issue, numbers 4, 31, 32, 34 and 36, are met without inventive change by the disclosures of the following prior art patents:

Martin	1,887,692	1932
Flemming	955,454	1910
Julius	1,018,568	1912
Slate	1,643,590	1927
Slate Br.	237,681	1925

30. In defendants' HPM and Frick presses there are employed no exhauster and diaphragm valve like the exhauster 81 and diaphragm valve 84 of the patent in suit. In the operations of defendants' HPM and Frick presses no attempt is made to main- [110] tain a constant pressure in the solidification chamber during formation and collection of the solid carbon dioxide therein. In both the HPM and Frick presses, prior to the pressing operation, the solidifying and pressing chamber is open to the atmosphere, so that carbon dioxide gas is freely permitted to escape through a vent pipe, and such vent to the atmosphere remains open during all of the pressing operation.

After the solidification and prior to the pressing operation in both the HPM and Frick presses, one of the platens is moved, so that some carbon dioxide gas in the solidifying and compressing chamber may pass therearound to the atmosphere.

In the triple point operations performed by defendants' HPM and Frick presses the supply of liquid carbon dioxide to the chambers of the presses is shut off before

a desired mass of solid has been collected in the chambers.

31. The defendants' machines, the HPM and Frick presses, contain the same elements in the same relationship and have the same mode of operation as the elements in the prior art devices, including the Martin unitary machines and the disclosures of the prior patents hereinbefore referred to. The method of use of defendants' machines, the HPM and Frick presses, includes the same steps in the same relationship as the steps employed in the use of the machines of the prior art. Neither defendants' machines nor their method of use complained of as an infringement involve inventive change over the prior art.

Conclusions of Law

1. This Court has jurisdiction of the parties and of the subject matter. [111]

2. Title to United States Letters Patent No. 2,025,698 in suit is vested in plaintiff International Carbonic Engineering Company. Plaintiff International Carbonic, Inc. has exclusive right to issue sublicenses thereunder.

3. That the plaintiffs do not come into court with unclean hands.

4. The plaintiffs have not violated the anti-trust laws of the United States, and particularly sections 1, 2 or 3 of Title 15, United States Code.

5. United States Letters Patent No. 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, do not comply with the requirements of 35 U. S. C. 33 (R. S. 4888) and are void and invalid.

6. Machines embodying the invention allegedly contained in United States Letters Patent No. 2,025,698, and specifically defined in claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, were known to and used, and constructed and in successful public use within the United States by others than Harry W. Cole and Malcolm W. McLaren, and within the meaning of 35 U. S. C. 31 (R. S. 4886) more than two years prior to the date of filing of application for said patent in suit, and said Letters Patent No. 2,025,698 are invalid.

7. Harry W. Cole and Malcolm W. McLaren were not the first inventors of United States Letters Patent No. 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, and said Letters Patent are invalid and have at all times from the issue thereof been invalid. [112]

8. United States Letters Patent No. 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, are void and invalid for lack of invention in view of the state of the art.

9. United States Letters Patent No. 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, are void and invalid for lack of novelty.

10. United States Letters Patent No. 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, are void and invalid as anticipated by prior structures and patents.

11. United States Letters Patent No. 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 there-

ot, are void and invalid on the ground that the purported patentees of the said Letters Patent claimed more than they invented.

12. United States Letters Patent No. 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, are invalid as covering an aggregation of old elements and steps.

13. United States Letters Patent No. 2,025,698 in suit, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, have not been infringed by the acts of the defendants, or any of them; neither defendants' machines nor their methods of use complained of in this action embody or utilize any invention of the patent claims in issue.

14. The complaint will be dismissed on the merits, with judgment and decree in conformity to the findings and conclu- [113] sions, with costs to defendants. See written memo. opinion on file for further details.

Dated: This 13th day of November, 1944.

RALPH E. JENNEY

Judge

Approved as to form, this 8th day of November, 1944

LYON & LYON

By R. E. Caughey

Attorneys for Plaintiffs.

[Endorsed]: Filed Nov. 13, 1944. [114]

In the United States District Court
Southern District of California

Central Division

Civil Action No. 1851-RJ

INTERNATIONAL CARBONIC ENGINEERING
COMPANY and INTERNATIONAL CARBONIC,
INC.,

Plaintiffs,

vs.

NATURAL CARBONIC PRODUCTS, INC., a corporation, GEORGE PEPPERDINE FOUNDATION, a corporation, L. H. POLDERMAN, W. L. BENSON and C. B. BENSON, individually and as a copartnership doing business under the fictitious firm name and style of NATURAL CARBONIC PRODUCTS,

Defendants.

JUDGMENT AND DECREE DISMISSING FURTHER AMENDED AND SUPPLEMENTAL COMPLAINT ON THE MERITS AND DISMISSING COUNTERCLAIMS—WITH COSTS TO DEFENDANTS

This cause having come on for hearing on May 3-5, 9-12, 16-19, 23-26, 31, June 1, 3, 10, 14, 15, 16 and 17, upon the pleadings and proofs, briefs having been filed and oral argument had, and the Court being fully advised in the premises: now, therefore, upon consideration thereof and upon the findings of fact and conclusions of law filed concurrently herewith, It Is Hereby

Ordered, Adjudged and Decreed by the Court as Follows: [115]

1. This Court has jurisdiction of the parties and of the subject matter.

2. Defendants' counterclaims are dismissed.

3. Letters Patent No. 2,025,698 issued December 24, 1935 and assigned to International Carbonic Engineering Company, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, are void and invalid.

4. Defendants Natural Carbonic Products, Inc., George Pepperdine Foundation, L. H. Polderman, W. L. Benson and C. B. Benson, individually and as a copartnership doing business under the fictitious firm name and style of Natural Carbonic Products, and each of them, have not infringed said Letters Patent No. 2,025,698 and claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, or any of said claims.

5. The complaints are dismissed with prejudice. Defendants shall recover from plaintiffs their costs of suit and disbursements, including reporters' fees, to be taxed by the Clerk. Costs taxed in the sum of \$1508.41. Retaxed \$1474.41.

Dated this 13th day of November, 1944.

RALPH E. JENNEY

United States District Judge

Approved as to Form this 8th day of November, 1944.

LYON & LYON

By R. E. Caughey

Attorneys for Plaintiffs

Judgment entered Nov. 13, 1944. Docketed Nov. 13, 1944. Book 29, page 44. Edmund L. Smith, Clerk; by P. D. Hooser, Deputy.

[Endorsed]: Filed Nov. 13, 1944. [116]

[Title of District Court and Cause.]

MOTION FOR SUBSTITUTION OF PARTY
PLAINTIFF

Now comes plaintiff International Carbonic Engineering Company, pursuant to Rule 25 of the Rules of Civil Procedure, and respectfully shows unto the Court as follows:

At the time of the filing of the complaint herein plaintiff International Carbonic Engineering Company, a Delaware corporation, was the sole owner of the Letters Patent in suit No. 2,025,698, and plaintiff International Carbonic, Inc., a Delaware corporation, was a wholly owned subsidiary of plaintiff International Carbonic Engineering Company and the exclusive licensee of, to and under said Letters Patent No. 2,025,698 with the right to sublicense others thereunder; [117]

By instruments in writing executed on the 30th day of September, 1944, plaintiff International Carbonic Engineering Company acquired all of the property, assets and business, including the good will thereof, of the above named International Carbonic, Inc., and did thereby and does hereby assume each and every obligation and liability of said plaintiff International Carbonic, Inc.;

By written assignment executed on the 16th day of October, 1944, plaintiff International Carbonic Engineering Company became the owner and now is the owner of the entire right, title and interest in and to the Letters Patent in suit No. 2,025,698 (and other letters patent), together with all causes and rights of action arising out of or accruing from past infringement of said Letters Patent No. 2,025,698, which said assignment was duly recorded in the United States Patent Office on October 27, 1944, in Liber T-200, page 145;

On or about September 30, 1944, said plaintiff International Carbonic, Inc. was voluntarily and duly dissolved under and pursuant to the laws of said State of Delaware, and has no further right, title or interest of, to or under said Letters Patent in suit No. 2,025,698;

On November 13, 1944, a final judgment and decree was entered in this Court adjudging that said Letters Patent No. 2,025,698 and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof are void and invalid and not infringed by the defendants, and dismissing the complaint on the merits;

Pursuant to the statutes and laws of the United States, the time in which to take an appeal from said final judgment and decree has not yet expired;

Wherefore said plaintiff International Carbonic Engineering Company now comes into court and moves that it be [118] substituted as the sole plaintiff in the above entitled cause in the name, place and stead of said plaintiffs International Carbonic Engineering Company and International Carbonic, Inc., and that all pleadings and papers in said cause be deemed amended in accordance therewith to show such substitution, and that all further proceedings had or taken in said cause be so had or taken in the name of said International Carbonic Engineering Company as the sole plaintiff, the same to be without prejudice to, and subject to, any rights of the defendants herein; and further moves that an order be entered herein substituting said plaintiff International Carbonic Engineering Company as the sole plaintiff herein, in the name, place and stead of the above named plaintiffs.

LEONARD S. LYON

Attorney for Plaintiff International Carbonic Engineering
Company

To C. A. Miketta and to Harris, Kiech, Foster & Harris
and Ward D. Foster, Attorneys for Defendants:

Please take notice that the undersigned will bring the
above motion on for hearing before this Court at its
Court Room in the United States Post Office and Courts
Building, Los Angeles, California, on Monday, the 22nd
day of January, 1945, at ten o'clock in the forenoon of
that day or as soon thereafter as counsel can be heard.

Dated this 16th day of January, 1945.

LEONARD S. LYON

Attorney for Plaintiff International Carbonic Engineering
Company

[Endorsed]: Filed Jan. 17, 1945. [119]

[Title of District Court and Cause.]

ORDER FOR SUBSTITUTION

This cause having come on for hearing on motion of
plaintiff International Carbonic Engineering Company to
be substituted as the sole plaintiff in the above entitled
cause and the Court being fully advised in the premises,
it is ordered that said plaintiff International Carbonic En-
gineering Company be and it is hereby substituted as
the sole plaintiff in the above entitled cause in the name,
place and stead of the plaintiffs International Carbonic
Engineering Company and International Carbonic, Inc.,
and that the title of the action be amended accordingly,
and that the action be continued by and in the name of
the said International Carbonic Engineering Company,
and that all further proceedings, had or taken in said
cause be so had or taken [120] in the name of said In-
ternational Carbonic Engineering Company as the sole
plaintiff, without prejudice to any proceeding already had

in this action and without prejudice to and subject to any of the rights of the defendants herein.

Dated this 22nd day of January, 1945.

RALPH E. JENNEY,
Judge.

Defendants hereby consent to the substitution of plaintiff International Carbonic Engineering Company as the sole plaintiff in the above entitled action, and further consent to the entry of the hereinabove order of substitution.

C. A. MIKETTA
WARD D. FOSTER
Attorneys for all Defendants

[Endorsed]: Filed Jan. 22, 1945. [121]

In the United States District Court
Southern District of California
Central Division

Civil Action No. 1851-RJ

INTERNATIONAL CARBONIC ENGINEERING
COMPANY,

Plaintiff

vs.

NATURAL CARBONIC PRODUCTS, INC., a corporation, GEORGE PEPPERDINE FOUNDATION, a corporation, L. H. POLDERMAN, W. L. BENSON and C. B. BENSON, individually and as a copartnership doing business under the fictitious firm name and style of NATURAL CARBONIC PRODUCTS,

Defendants

NOTICE OF APPEAL

Notice is hereby given that International Carbonic Engineering Company, plaintiff-appellant, does hereby ap-

peal to the Circuit Court of Appeals for the Ninth Circuit from the parts of the Final Judgment entered in this action on November 13, 1944, which adjudge as follows:

3. Letters Patent No. 2,025,698 issued December 24, 1935 and assigned to International Carbonic Engineering Company, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, are void and invalid.

4. Defendants Natural Carbonic Products, Inc., George Pepperdine Foundation, L. H. Polderman, W. L. Benson [122] and C. B. Benson, individually and as a copartnership doing business under the fictitious firm name and style of Natural Carbonic Products, and each of them, have not infringed said Letters Patent No. 2,025,698 and claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, or any of said claims.

5. The complaints are dismissed with prejudice. Defendants shall recover from plaintiffs their costs of suit and disbursements, including reporters' fees, to be taxed by the Clerk. Costs taxed in the sum of \$1474.41.

Dated: This 8th day of February, 1945.

LYON & LYON
LEONARD S. LYON
REGINALD E. CAUGHEY
Attorneys for Plaintiff-Appellant

Mailed copy to Ward D. Foster, and Harris, Kiech, Foster & Harris; and mailed copy to Casimir A. Miketta, and Howard Burrell—attorneys for defendants.

[Endorsed]: Filed Feb. 8, 1945. [123]

[Title of District Court and Cause.]

PLAINTIFF-APPELLANT'S CONCISE
STATEMENT OF POINTS ON APPEAL

The plaintiff-appellant, International Carbonic Engineering Company, pursuant to the provisions of Rule 75(d) of the Rules of Civil Procedure, specifies the following concise statement of points upon which it intends to rely on appeal:

1. That the District Court erred in determining that the defendants above named, and each of them, have infringed the patent in suit 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof.

2. That the District Court erred in determining that the Letters Patent in suit 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, does not comply with the [124] requirements of Title 35 United States Code, Section 33, and is void and invalid.

3. That the District Court erred in determining that the Letters Patent in suit 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, is invalid as covering an aggregation of old elements and steps.

4. That the District Court erred in determining that the Letters Patent in suit 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, is void and invalid for lack of invention in view of the state of the art.

5. That the District Court erred in determining that the Letters Patent in suit 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, is void and invalid for lack of novelty.

6. That the District Court erred in determining that the Letters Patent in suit 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, is void and invalid as anticipated by prior structures and patents.

7. That the District Court erred in determining that the Letters Patent in suit 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, is void and invalid because the patentees claimed more than they invented.

8. That the District Court erred in determining that machines embodying the invention contained in Letters Patent 2,025,698, and particularly in the claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, were known to and used and constructed and in successful public use within the United States by others than Harry W. Cole and Malcolm W. McLaren more than two years prior to the date of filing of the application for the patent in suit and said Letters Patent is therefore invalid. [125]

9. That the District Court erred in dismissing the Complaints herein with prejudice and in awarding costs to defendants.

10. That the District Court erred in failing to determine that the Letters Patent in suit 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, is good and valid in law.

11. That the District Court erred in failing to determine that the defendants above named, and each of them, have infringed the patent in suit 2,025,698, and particularly claims 4, 31, 32, 33, 34, 36, 38 and 39 thereof, by using machines embodying the invention claimed in claims 4, 31, 32, 33, 34 and 36 and employing the method claimed in claims 38 and 39.

Dated: This 8th day of February, 1945.

LYON & LYON

LEONARD S. LYON

REGINALD E. CAUGHEY

Attorneys for Plaintiff-Appellant

[Endorsed]: Filed Feb. 8, 1945. [126]

[Title of District Court and Cause.]

COST BOND ON APPEAL FROM JUDGMENT
DISMISSING COMPLAINT

Know All Men By These Presents:

That United States Fidelity and Guaranty Company, a Maryland corporation, of Baltimore, Maryland, duly licensed to transact business in the State of California, is held and firmly bound unto Natural Carbonic Products, Inc., a corporation, George Pepperdine Foundation, a corporation, L. H. Polderman, W. L. Benson and C. B. Benson, a copartnership doing business under the fictitious firm name and style of Natural Carbonic Products, defendants in the above entitled cause, in the sum of Two Hundred Fifty Dollars (\$250) to be paid to said defendants, their heirs, executors, administrators, [127] successors or assigns, for which payment well and truly to be made United States Fidelity and Guaranty Company binds itself, its successors and assigns, firmly by these presents.

The condition of the above obligation is such:

That whereas International Carbonic Engineering Company, a Delaware corporation, of Wilmington, Delaware, is about to take an appeal to the United States Circuit Court of Appeals for the Ninth Circuit from that part of the Final Judgment entered in this cause on November 13, 1944, contained in Paragraphs 3, 4 and 5 thereof:

Now, Therefore, if the above named appellant shall prosecute said appeal to effect and answer all costs which may be adjudged against it if the appeal is dismissed, or the judgment affirmed, or such costs as the Appellate Court may award if the judgment is modified, then this obligation shall be void; otherwise to remain in full force and effect.

In accordance with Rule 8 of the Rules of Civil Procedure for the District Court of the United States for the Southern District of California, it is hereby agreed by the surety that in case of default or contumacy on the part of the principal or surety, the Court may, upon notice to them of not less than ten (10) days, proceed summarily and render judgment against them, or either of them, in accordance with their obligation and award execution thereon.

Signed, sealed and dated this 8th day of February, 1945.

[Seal]

UNITED STATES FIDELITY AND
GUARANTY COMPANY

By O. D. Brick

Attorney-in-Fact

The Premium on This Bond Is \$10.00 for 1 year.

State of California

County of Los Angeles—ss:

On this 8th day of February in the year one thousand nine hundred and forty-five, before me, Agnes L. Whyte, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared O. D. Brick, known to me to be the duly authorized Attorney-in-fact of the United States Fidelity and Guaranty Company, and the same person whose name is subscribed to the within instrument as the Attorney-in-fact of said Company and the said O. D. Brick duly acknowledged to me that he subscribed the name of the United States Fidelity and Guaranty Company thereto as Surety and his own name as Attorney-in-fact.

In Witness Whereof, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

[Seal]

AGNES L. WHYTE

Notary Public in and for Los Angeles County, State of California

My Commission Expires Feb. 26, 1945

Examined and Recommended for Approval.

REGINALD E. CAUGHEY

Attorney for Appellant

I hereby approve the foregoing.

Dated this 8th day of February, 1945.

Clerk.

[Entitled]: Filed Feb. 8, 1945. [128]

[Title of District Court and Cause.]

BOND ON APPEAL SUPERSEDING JUDGMENT
FOR COSTS

Know All Men By These Presents:

That United States Fidelity and Guaranty Company, a Maryland corporation, of Baltimore, Maryland, duly licensed to transact business in the State of California, is held and firmly bound unto Natural Carbonic Products, Inc., a corporation, George Pepperdine Foundation, a corporation, L. H. Polderman, W. L. Benson and C. B. Benson, a copartnership doing business under the fictitious firm name and style of Natural Carbonic Products, defendants in the above entitled cause, in the sum of Seven-

teen Hundred Fifty Dollars (\$1750) to be paid to said defendants, their heirs, executors, administrators, successors or [129] assigns, for which payment well and truly to be made United States Fidelity and Guaranty Company binds itself, its successors and assigns, firmly by these presents.

The condition of the above obligation is such:

That whereas International Carbonic Engineering Company, a Delaware corporation, of Wilmington, Delaware, is about to take an appeal to the United States Circuit Court of Appeals for the Ninth Circuit from that part of the Final Judgment entered in this cause on November 13, 1944, contained in Paragraphs 3, 4 and 5 thereof, and including the awarding of costs to the above named defendants in the amount of Fourteen Hundred Seventy-four Dollars Forty-one Cents (\$1474.41) for which judgment has been entered against International Carbonic Engineering Company;

Now, Therefore, if the appellant, International Carbonic Engineering Company, shall satisfy said judgment for costs in full, together with costs, interest and damages for delay, if for any reason the appeal is dismissed, or if the judgment is affirmed, and shall satisfy in full such modification of the judgment and such costs, interest and damages as the Appellate Court may adjudge and award, then this obligation shall be void, otherwise to remain in full force and effect.

In accordance with Rule 8 of the Rules of Civil Procedure for the District Court of the United States for the Southern District of California, it is hereby agreed by the surety that in case of default or contumacy on the part of the principal or surety, the Court may, upon notice to them of not less than ten (10) days, proceed summarily and render [130] judgment against them, or

either of them, in accordance with their obligation and award execution thereon.

Signed, sealed and dated this 8th day of February, 1945.

[Seal]

UNITED STATES FIDELITY AND
GUARANTY COMPANY

By O. D. Brick

Attorney-in-Fact

The Premium on This Bond Is \$25.00 for 1 Year

State of California

County of Los Angeles—ss:

On this 8th day of February in the year one thousand nine hundred and forty-five, before me, Agnes L. Whyte, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared O. D. Brick, known to me to be the duly authorized Attorney-in-fact of the United States Fidelity and Guaranty Company, and the same person whose name is subscribed to the within instrument as the Attorney-in-fact of said Company and the said O. D. Brick duly acknowledged to me that he subscribed the name of the United States Fidelity and Guaranty Company thereto as Surety and his own name as Attorney-in-fact.

In Witness Whereof, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

[Seal]

AGNES L. WHYTE

Notary Public in and for Los Angeles County, State of
California

My Commission Expires Feb. 26, 1945

Examined and Recommended for Approval

REGINALD E. CAUGHEY

Attorney for Appellant

Approved as to Amount of Bond

C. A. MIKETTA

Attorneys for Defendants other than

George Pepperdine Foundation

HARRIS, KIECH, FOSTER & HARRIS

WARD D. FOSTER

Attorney for Defendant George Pepperdine Foundation

I hereby approve the foregoing Bond on Appeal Superseding Judgment for Costs and order that, upon the filing of said Bond, execution upon said Judgment for Costs shall be stayed, this Court reserving the right to increase the amount of the Supersedeas Bond for sufficient cause shown.

Feb. 8, 1945.

RALPH E. JENNEY

Judge.

[Endorsed]: Filed Feb. 9, 1945. [131]

[Title of District Court and Cause.]

ORDER

Upon application of defendants-appellees and good cause, It Is Hereby Ordered that the time during which defendants-appellees may serve and file a designation of additional portions of the record, proceedings and evidence to be included in the record on appeal Be Extended up to and including March 23, 1945.

Dated: February 16, 1945.

RALPH E. JENNEY

Judge, United States District Court

[Endorsed]: Filed Feb. 17, 1945. [132]

[Title of District Court and Cause.]

STIPULATION EXTENDING TIME FOR FILING
RECORD AND DOCKETING APPEAL

It Is Stipulated and Agreed, the Court consenting thereto, that Appellant's time within which the record on appeal may be filed and the appeal docketed in the Circuit Court of Appeals for the Ninth Circuit Be Extended to and including April 19, 1945.

Dated this 16th day of March, 1945.

LYON & LYON

LEONARD S. LYON

Attorneys for Appellant

C. A. MIKETTA

by WARD D. FOSTER

Attorneys for Appellees

Approved and So Ordered this 20th day of March,
1945.

RALPH E. JENNEY

Judge

[Endorsed]: Filed Mar. 21, 1945. [133]

[Title of District Court and Cause.]

STIPULATION EXTENDING TIME FOR FILING
RECORD AND DOCKETING APPEAL

It Is Stipulated and Agreed, the Court consenting thereto, that Appellant's time within which the record on ap-

peal may be filed and the appeal docketed in the Circuit Court of Appeals for the Ninth Circuit be extended to and including May 9, 1945.

Dated: This 18th day of April, 1945.

LYON & LYON
REGINALD E. CAUGHEY
Attorneys for Appellant
WARD D. FOSTER
Attorneys for Appellees

It Is so Ordered this 18th day of April, 1945.

PAUL J. McCORMICK
Judge.

[Endorsed]: Filed Apr. 19, 1945. [134]

[Title of District Court and Cause.]

STIPULATION AND ORDER

It Is Stipulated, by and between the respective counsel, that the Clerk of this Court shall transmit to the Clerk of the Ninth Circuit Court of Appeals, the original Exhibits in this action heretofore designated in plaintiff's Designation and defendants' Counterdesignation as part of the record on appeal; said original Exhibits to be retained pending the disposition of this appeal and thereafter to be returned to the Clerk of this Court.

It Is Further Stipulated, the plaintiff having filed one copy of the reporter's transcript as provided for in Rule 75, subdivision (b) of the Rules of Civil Procedure, that

the additional copy for the use of appellees need not be filed. [145]

It Is Further Stipulated that, in addition to the items heretofore designated to be included in the record on appeal by plaintiff's Designation and defendants' Counter-designation, the following items filed subsequent to said Designations be included in the record on appeal:

Order extending time to docket, dated February 16, 1945;

Order extending defendants' time to file a Counter-designation, dated February 16, 1945;

Order extending plaintiff's time to docket appeal, dated March 16, 1945;

Order further extending plaintiff's time to docket appeal, dated April 18, 1945;

This Stipulation and Order.

LYON & LYON

R. E. CAUGHEY

Attorneys for Plaintiff-Appellant

C. A. MIKETTA

WARD D. FOSTER

Attorneys for Defendants-Appellees.

It Is so Ordered this 7th day of May, 1945.

RALPH E. JENNEY

Judge.

[Endorsed]: Filed May 7, 1945. [146]

[Title of District Court and Cause.]

CERTIFICATE OF CLERK

I, Edmund L. Smith, Clerk of the District Court of the United States for the Southern District of California, do hereby certify that the foregoing pages numbered from 1 to 146 inclusive contain full, true and correct copies of Complaint; Portion of Motion for More Definite Statement or for Bill of Particulars; Plaintiffs' Bill of Particulars; Plaintiffs' Bill of Particulars in Response to Specification 4; Order to Inspect; Answer; Interrogatories Propounded by Plaintiffs etc.; Defendant's Answers to Plaintiffs' Interrogatories; Defendant's Additional and Amplified Answer to Plaintiffs' Interrogatories; Further Answers to Plaintiffs' Interrogatories; Further Amended and Supplemental Complaint; First and Amended Answer of Natural Carbonic Products, Inc., et al to Further Amended Complaint, except portions relating to Counterclaim; First Answer of George Pepperdine Foundation to Further Amended and Supplemental Complaint, except portions relating to Counterclaim; Stipulation re Patents; Notice to Plaintiffs re Corrections to Answers to Plaintiffs' Interrogatories; Two Notices to Plaintiffs by Defendants re Prior Art to be Relied Upon; Affidavit of C. A. Miketta; Order; Notice of Taking Depositions on Behalf of Defendants; Minute Order Entered July 15, 1944; Findings of Fact and Conclusions of Law; Judgment and Decree Dismissing Further Amended and Supplemental Complaint on the Merits and Dismissing Counterclaims with Costs to Defendants; Motion for Sub-

stitution of Party Plaintiff; Order for Substitution; Notice of Appeal; Concise Statement of Points on Appeal; Cost Bond on Appeal; Bond on Appeal Superseding Judgment for Costs; Order; Two Stipulations and Orders Extending Time for Docketing Appeal; Designation of Contents of Record on Appeal; Counter-Designation of Additional Portions of Record, Proceedings and Evidence on Appeal and Stipulation and Order re Record on Appeal which, together with Reporter's Transcript of Decision of the Court, copy of Reporter's Transcript, Original Plaintiff's Exhibits 1 to 8, inclusive, 11, 14, 15, 17 to 28 inclusive and 31 to 65 inclusive, Original Defendants' Exhibits A to U, inclusive, DD to VV, inclusive, transmitted herewith, constitute the record on appeal to the United States Circuit Court of Appeals for the Ninth Circuit.

I further certify that my fees for preparing, comparing, correcting and certifying the foregoing record amount to \$25.55 which sum has been paid to me by appellant.

Witness my hand and the seal of said District Court this 7th day of May, 1945.

EDMUND L. SMITH,

[Seal]

Clerk

By THEODORE HOCKE

Chief Deputy Clerk.

[Title of District Court and Cause.]

Hon. Ralph E. Jenney, Judge Presiding.

REPORTER'S TRANSCRIPT OF TESTIMONY
AND PROCEEDINGS ON TRIAL

Appearances:

Lyon & Lyon, by
L. S. Lyon, Esq., and
R. E. Caughey, Esq.
Hugh M. Morris, Esq.
Allen E. Peck, Esq.,

For Plaintiffs.

Harris, Kietch, Foster & Harris, by
Ward D. Foster, Esq.,

For Defendant George Pepperdine Foundation.

Casimir A. Miketta, Esq.,

For Remaining Defendants.

Mr. Morris: * * * [4*]

* * * * *

At the time Cole and McLaren began their work resulting in the patent in suit carbon dioxide had been liquefied. It had been solidified. Both the liquid and the solid had been and were being commercially made and sold. Solidification was effected in one apparatus. Pressing the light highly [6] porous product into blocks for transportation and use was carried out in another apparatus. [7]

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Mr. Miketta: * * * [29]

* * * * *

And I would like to call your Honor's [30] attention specifically to claim 33, and if you do not mind, I will illustrate it on the blackboard as we go along.

The preamble reads: "In a gas solidifying and pressing apparatus,"—now, that is just a very general statement of what it is supposed to be. The first element—we can forget about words and look for the elements, because those are the things that define a structure in a machine. "a solidifying and pressing chamber having one end thereof open,"—all right. Let us draw a chamber (diagramming on blackboard) and that may represent the cross-section of a chamber having one open end. The top end is open.

The next element referred to in the claim is: "a closure head movable to close the open end of said chamber and to seal the chamber from the atmosphere,"—very well. We can draw in yellow now a closure head as defined in that claim, which, as stated in the claim, is to seal the chamber from the atmosphere. We now have, you may say, a section of a bottom. It has a bottom; it has sides; and it has this movable closure. It is supposed to be movable because the claim so states.

And the next element referred to in the claim, I quote: "means for moving said closure head to and from chamber closing position and for maintaining said head in chamber closing position against pressures within the chamber,"— Well, now, "means for moving" may be any means. We can illustrate that by, let us say, a rod and up above that we [31] have some sort of hydraulic means for moving it up and down. It could be a rack and pinion. As a matter of fact, I think it could be just a pair of hands, if the pressures are not high enough. You could have various means.

Then the claim reads: "a pressing plunger reciprocal in said chamber for pressing a mass of solidified gas in the chamber into a block against said closure head while the latter is held in chamber closing position by said means,"—now, let us draw this pressing plunger inside the chamber, and I will draw it in green. All right. And that can be moved toward and away from that closure head.

"Said plunger"—this is what the claim says—"said plunger formed for passage of gas therepast as the plunger is moved in the chamber,"—very well. In order to live up to that requirement we can say that that plunger is loose in there so that it moves up and the gas can get around it.

Then the claim continues by stating: "means for forcing said plunger into block pressing engagement with a mass of solidified gas in the chamber,"—well, in order to do that I am going to make a hole in the bottom of this now, the bottom of the chamber, and put in a gasket there or any suitable gland; and I will draw a bottom plunger through that hole and attach to the bottom of that ram or rod some means, as a hydraulic cylinder. So that we have "means for forcing said plunger into block pressing engagement with a mass of solidified gas in the chamber." [32]

We can assume that this mechanism now will raise that plunger against whatever is in this chamber toward the closure head.

Then the claim finally states: "and said closure head being movable to position opening the end of the chamber upon completion of the block pressing for removal of the block through the chamber open end."

Well, that is a statement of the function or result that cannot even be illustrated. [33]

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Mr. Miketta: * * * [50]

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Let us go to the other extreme. The most detailed claim of the claims that this patent has,—there are two claims, 34 and 36, including all of the elements. Let us picturize claim 36.

Claim 36 starts out in stating:

“In gas solidifying and pressing apparatus;”

That is the preamble. Then it continues: [51]

“a gas solidifying and pressing chamber having one end thereof open,”

Which I will again draw; a chamber with an open end. Then the claim states:

“a closure head movable between position closing the opening end of the chamber to seal the chamber from atmosphere,”

We will put a closure element or lid on that chamber, and that is movable.

“between position closing the open end of the chamber to seal the chamber from atmosphere, and position removed from and opening the chamber end for discharge of material therefrom,”

I will not indicate it in the open position. The third element is:

“Means for moving said closure head between chamber opening and closing positions and for maintaining the head under sufficient pressure when in closed position to overcome pressures within the chamber acting to force the head to open position,”

All those words simply mean we have something here again which raises and lowers that lid. Then the next item in claim 36 is:

“a pressing plunger reciprocal in the chamber”

I will indicate that with green.

“toward and from said closure head and in normal inactive [52] position disposed in the chamber spaced from said head,”

So I will draw it in the bottom part of this chamber. That is the normal position of it. It is in an inactive position. Then the claim continues:

“means for supplying a compressed gas to said chamber when the closure head is in chamber closing position and the pressing plunger is in normal inactive position to convert a portion of said gas into solidified form in the chamber between the plunger and pressing head,”

Well, all that means, again, is that we will put in an inlet in here somewhere in the wall of the chamber, put a hole and put in a pipe, and that is our inlet. For what? The claim says “a compressed gas.” It does not say “a liquid gas”—“a compressed gas.” A compressed air would answer that description.

Then the claim reads: “means for withdrawing the unsolidified gas from the chamber during formation of the solidified gas therein,”—means for withdrawing. Very well, we will put in another hole in the wall and we will hook that up with the pipe; and now we have an outlet pipe for whatever gas is in the chamber.

The claim then continues: “and means for forcing said pressing plunger toward a mass of solidified gas to press such mass into a block against the closure head,”—

it does not identify what type of means that should be. It can be almost anything from a lever to hydraulic means; but since [53] practical machines are hydraulic, we will just put a piston rod down there and indicate that there is a hydraulic cylinder there.

Then the last clause reads: "said closure head being movable after completion of the block pressing by said plunger to position removed from the chamber for unobstructed removal of the block from the chamber." Now, that is just a functional statement. So, stripping it of all its verbiage, we find that claim 36 is, as I say, the most limited claim, or the one that includes all of the so-called elements is nothing, again, but a press with an inlet and an outlet. All of those elements are individually old—an outlet, an inlet—the plaintiffs have admitted that.

And let us see how close the prior art approximates this particular structure. If your Honor will refer to the book of patents, and particularly to patent 1,288,255, issued to Stastney in 1918, and particularly look at Fig. 1, your Honor will see that in that patent there is described the same combination of elements. In the first place we have a chamber, which in this case has hollow walls indicated by the numerals 6 and 7. So that may I just add in here a little outside hollow wall in white crayon? [54]

* * * * * * * * *

The Court: * * * Let us get down to the proof here, and go ahead and call your witnesses.

Mr. Morris: May I put in one or two exhibits?

The Court: Yes, certainly. I did not mean in the sense of persons.

Mr. Morris: The first is a stipulation as to using uncertified copies, and so forth, usually mentioned in a

case of this kind. Is it your Honor's practice to read it into the record, or shall I merely deliver the copy, as Exhibit 1? [175]

* * * * *

The Court: It already has been filed, as a matter of fact. I think it had better be admitted in evidence.

Mr. Morris: Then I offer the filed copy as Plaintiffs' Exhibit No. 1.

[Note: Plaintiff's Exhibit No. 1 will be found in the Book of Exhibits at page 1315.]

The Court: So admitted. You may take the copy, Mr. Clerk.

Mr. Morris: As Plaintiffs' exhibit I next offer into evidence the patent in suit, No. 2,025,698. I have a copy which I hand to your Honor. That is the exhibit.

The Court: Let it be marked as an exhibit.

Mr. Morris: I have a certified copy. May I offer that in evidence?

The Court: Yes. It may be received as Plaintiffs' Exhibit No. 2. [177]

[Note: Plaintiff's Exhibit No. 2 will be found in the Book of Exhibits at page 1317.]

* * * * *

Mr. Miketta: If the court please, I see no necessity of burdening the record with a great many exhibits, in view of the fact that we have admitted the genuineness of the certificate of incorporation of the International Carbonic Engineering Company and have also admitted the fact that it was properly incorporated, and the certificate of the Secretary of State of the State of Delaware.

I think we can stipulate on the record, for example, that there was an assignment on July 20, 1941, assigning the application for the patent in suit, serial 279,641, signed by Harry W. Cole, and Malcolm W. McLaren, dated July 20, 1941, whereby that application was assigned to the Carbonic Equipment Corporation.

I will also stipulate that by assignment signed by the Carbonic Equipment Corporation, on May 4, 1934, by _____ as president, and W. W. White, secretary, acknowledged September 17, 1935, application serial number 279,641, was assigned to International Carbonic Engineering Company, a Delaware corporation, and I will also stipulate that by an agreement of merger and consolidation—

Mr. Morris: I am not offering that.

Mr. Miketta: Very well. So far as title is concerned, [185] I am willing to stipulate to it, your Honor.

The Court: The stipulation will be received. Is that satisfactory, Mr. Morris?

Mr. Morris: Yes, your Honor, but may I make this statement: That the form of stipulation submitted to learned counsel last week was that:

1. Plaintiff, International Carbonic Engineering Company, was incorporated under the laws of the State of Delaware in 1920, and still is a corporation created by and existing under the laws of said state.

The Court: I understand you stipulated to that?

Mr. Miketta: I stipulated to that, your Honor. I received that stipulation after I had acknowledged the genuineness of many of these documents. Frankly, I do not see any necessity of the additional stipulation.

Mr. Morris: 2. The plaintiff, International Carbonic, Inc., was organized under the laws of the State of

Delaware on or about June 25, 1940, and still is a corporation created by and existing under the laws of said state.

The Court: May it be so stipulated?

Mr. Miketta: Yes.

Mr. Morris: 3. National Carbonic Products, Inc., was organized under the laws of the State of California on or about the 25th of January, 1940.

The Court: May it be so stipulated?

Mr. Miketta: I stipulate to that, your Honor. [186]

Mr. Morris: No. 4 was: Plaintiff, International Carbonic Engineering Company has legal title to the patent in suit, No. 2,025,698.

Mr. Miketta: I think that is covered by assignment, your Honor. We have already stipulated that by assignment they have acquired the right, title and interest to the patent.

The Court: I think that is true. However, may it be so stipulated, to keep the record?

Mr. Miketta: Yes. [187]

* * * * *

Mr. Morris: * * * I am offering interrogatory No. (1): "Was defendant using at its plant near Niland, Imperial County, State of California, at the time the complaint herein was filed, the three presses in which carbon dioxide snow is compressed into blocks, referred to in Paragraph VI of defendants' answer?"

The answer of May 29, 1943, was:

"Prior to the filing of the complaint herein defendant had used the three presses referred to in Paragraph VI of [188] defendant's answer; but at the time the complaint was filed defendant was not using the two Frick presses."

“(2) If the answer to Interrogatory (1) is in the affirmative, was each of the said three presses then being used:

The answer of November 6, 1942, was:

“On October 21, 1941, the H. P. M. press was being used in the performance of its inherent function. The two Frick presses were not in operation.”

“(3) For what length of time immediately prior to the time of the filing of the complaint herein, had each of the said three presses been used by defendant at its plant near Niland, Imperial County, State of California, or elsewhere?”

The answer of May 29, 1943, the first two sentences:

“Prior to the tile of the filing of the complaint, defendant had used, at its plant near Niland, each of the three presses. The presses were not used continuously.”

I pause there to note that it is admitted that defendant was incorporated under the laws of this state in 1940, so that any use that was made was within less than two years prior to the filing of the complaint.

“(5) Has defendant used said three presses or any thereof since the filing of the complaint herein?”

The answer of March 25, 1943:

“In answer to plaintiffs’ Interrogatory 5 is ‘Yes.’”
[189]

“(6) If defendant has used, since the filing of the complaint herein, less than all of said presses, state which presses have been so used and the time or times of the use of each.”

The answer of March 25, 1943, was:

"In answer to plaintiffs' Interrogatory 6, defendant states that three presses have been used intermittently and at various times."

"(7) Which of said three presses has a compressing chamber?"

The answer of November 6, 1942:

"7-40. In response to Interrogatories 7 to 40, affiant attaches hereto Exhibits 9 and 10. Certain of the interrogatories are amplified hereafter.

"(Exhibits 9 and 10 attached to defendant's answer of November 6, 1942.)"

There are certain admissions in the discussions which took place before your Honor on various motions, and there was a hearing on April 12, 1943, lines 22-24, page 6, of the Reporter's Transcript of that hearing and shows as follows:

"The Court: He asks 'Which of the three presses has a compressing chamber?' and the answer is, 'All of them.'

"Mr. Miketta: That is correct."

"(9) Which of said compressing chambers is openable at one end to permit the removal or ejection of the carbon dioxide solidified and compressed therein?" [190]

Lines 18-26, page 7, and lines 1-4, page 8, of Reporter's Transcript of Hearing April 12, 1943, is:

"The Court: * * * 'Which of said compressing chambers is openable at one end to permit the removal or ejection of the carbon dioxide solidified and compressed therein?'

"Well, I think he is entitled to know that.

"Mr. Miketta: All of them, your Honor, in that instance, they all open because you have to get the stuff out.

"The Court: All of them open in one form or another.

"Mr. Miketta: You have to get the material out.

"The Court: You open it with screws or something and the answer to that is, 'All of them.'

"Mr. Miketta: That is correct, your Honor.

"The Court: And I think you should answer it. That will be granted as to 9."

And the answer of November 6, 1942, was:

"(Exhibits 9 and 10 attached to defendant's answer of November 6, 1942.)"

The answer of May 29, 1943, was:

"Each of the presses includes a wall forming a cylinder or chamber in which carbon dioxide snow is collected and compressed into a block; it is assumed that the interrogatories refer to this wall forming the cylinder as 'Compressing chamber.' In the light of such definition the answer to Interrogatory 9 is,—'All of them.'" [191]

"(13) In which of said chambers is the compressing means adapted to eject the compressed carbon dioxide after the carbon dioxide therein has been compressed or compacted?"

Answer of November 6, '42:

"Exhibits 9 and 10 attached to defendant's answer of November 6, '42."

Answer of May 29, '43, is:

"To the best of our knowledge and understanding of this interrogatory,—all of them."

“(14) Which of said chambers has connected or associated therewith, means or apparatus for supplying thereto liquefied carbon dioxide for expansion to produce in the chamber an accumulation of solidified carbon dioxide?”

Answer of November 6, '42:

“(Exhibits 9 and 10 attached to defendant's answer of November 6, '42.)”

The answer to interrogatory 14 made on May 29, '43, is this:

“This interrogatory, as revised by the Court, reads: ‘Into which of said chambers may liquefied carbon dioxide be injected?’ The answer is,—all of them.”

“(15) In which of said chambers is the carbon dioxide compressed, against a movable head of the chamber, by a ram or plunger?”

Answer of November 6, '42, is:

“Exhibits 9 and 10 attached to defendant's answer of November 6, '42.” [192]

The answer of May 29, 1943, is: “All of them.”

“(16) With respect to which of said chambers is the means for opening and closing the movable head of the chamber hydraulically operated?”

Answer of November 6, '42, is: “Exhibits 9 and 10 attached to defendant's answer of November 6, '42.”

The answer of May 29, '43, to interrogatory 16 is this: “If the term ‘hydraulic’ refers to both water and oil, the answer is,—all of them.

“(17) With respect to which of said chambers is the ram or plunger for compressing the solidified gas hydraulically operated?”

The answer of November 6, '43, was: "Exhibits 9 and 10 attached to defendant's answer of November 6, '42."

The Court: When you engineers talk about a thing being "hydraulically operated" you simply mean it is operated by some fluid or liquid, it doesn't make any difference what it is; is that true? It may be oil, it may be water, it may be—

* * * * * * * * *

The Court: —milk.

* * * * * * * * *

Mr. Morris: Mr. Jones tells me our answer is "Yes."

* * * * * * * * *

Mr. Morris: "(17) With respect to which of said chambers [193] is the ram or plunger for compressing the solidified gas hydraulically operated?"

And the ultimate answer was: "All of them."

18, I think—I was about to say that I think you will find the answers to 18 and 19 very interesting. But your Honor is following very closely and I withdraw my intended remark.

"(18) Which if said chambers has connected or associated therewith apparatus or means for controlling the gas pressure in said chamber?"

Answer of November 6, '43: "Exhibits 9 and 10 attached to defendant's answer of November 6, '42.

"With respect to Interrogatories 18 and 19, defendant can not truthfully answer these interrogatories since the scope or meaning of 'controlling the gas pressure' is not known. Defendant states that a plug cock or valve is in

the so-called blow-back line leading from the press to the compressor, but this is not set to give a definite, predetermined or controlled pressure in the press nor in the blow-back in line and that the pressure in the press and blow-back line varies from atmospheric or 0 pounds gage to about 80 pounds gage pressure."

Your Honor. I take it, understands what is meant by "gage pressure." That registers, as I understand it, at the pressure above atmospheric.

The Court: I assumed that that was what was meant by it. [194] But never take it for granted that I understand anything.

Mr. Morris: Well, I had to inquire even then, your Honor, whether my understanding was correct.

Answer of May 29, '43, as to 18 and 19 is this:

"Defendant can not truthfully answer these interrogatories as phrased since the meaning and scope of the term 'controlling the gas pressure in said chamber' is not understood and no particular stage of the operations is referred to. Defendant states that no automatic means are employed for maintaining any pre-determined pressure in the chambers, as stated in defendant's Exhibit 9 and 10. There is a blow-back line connected to each chamber and a manually operated valve in each blowback line, as shown by defendant's Exhibits 9 and 10, such blowback lines running back to a compressor. Upper and lower platens or rams assist in closing the ends of the chambers and thereby cause pressure to build up in the space enclosed by the chambers when liquid CO₂ is admitted into each chamber. Lower platen of H. P. M. press is slightly lowered at end of snow forming to let out some additional gas and is kept in such slightly lowered posi-

tion during pressing. Upper ram of Frick presses is slightly raised to let out some additional gas and kept in such slightly raised position while pressing upwardly with lower ram."

The Court: As I understand, the effect is the same; it is just done in two different places. [195]

Mr. Miketta: That is right, your Honor. You can either move the two of them or you can just move one as specified in the patent.

The Court: All right.

Mr. Morris: "(19) Describe, and illustrate by a drawing or drawings, the means or apparatus for controlling the gas pressure in said chamber and the relationship, connection, or association of such apparatus with said chamber."

I offer into evidence the exhibits 9 and 10 annexed to defendant's answer to the interrogatories; and I ask that Exhibit No. 9 be marked Plaintiffs' Exhibit 3, and Exhibit No. 10 be marked Plaintiffs' Exhibit No. 4, omitting from Exhibit 9 General Note 4 which says: "Upper ram open during press period." The answer which I just read shows what that opening was. That is vague and indefinite. And omitting from the H. P. M. press drawing general note No. 3: "Open chamber while pressing." Those notes I do not offer.

Mr. Miketta: Your Honor, I object to the introduction of modified or altered documents. They either should be offered into evidence in their original form, and they should not be altered. The exhibit was complete when introduced.

The Court: No; I don't think that principle of evidence is sound. I think he may do it with a document originating with you. Later, if you deem it is pertinent, you may ask [196] that they be admitted. I may be a little more strict than most Judges. I always like to have each fellow put in his case as he thinks best, and then let the other man supplement it with what he wants. In that way we do not get into this complication.

It may be admitted with those deletions.

[Note: Plaintiff's Exhibit No. 3 will be found in the Book of Exhibits at page 1327.]

[Note: Plaintiff's Exhibit No. 4 will be found in the Book of Exhibits at page 1328.]

Mr. Morris: May I explain?

The Court: I understand; I understand. You explained it in your opening statement.

Mr. Morris: The statement is at the end of the answer to interrogatories 18 and 19. That is the reason that I mean, with the sentence beginning "Lower platen of H. P. M. press is slightly lowered," etc., while you would not know from the general note on our present Exhibits 3 and 4 whether wide open, halfway open, that explains it.

The Court: I would not have understood it if you had not explained your position in your opening statement. I think I can grasp it.

Mr. Morris: Very well.

Answer to (19) under November 6, '42, is: "Exhibits 9 and 10 attached to defendant's answer of November 6, '42."

Answer of May 29, '43: "See answer under Interrogatory 18."

(18) A similar answer of May 29, '43.

Interrogatory 20: "What pressure is maintained by defendant in each of said chambers, [197]

"(a) during the time that liquefied carbon dioxide is being supplied to the said chambers, and

"(b) during the period, if any, intervening between the time the supply of liquefied carbon dioxide to the chamber is shut off and the completion of the solidification of the carbon dioxide?"

The answer of May 29, '43, is: "No predetermined pressure schedule is maintained by defendant and pressures vary with operator on the job, temperatures of air, whether presses have been working immediately prior or not, etc.

"(a)—To the best of our knowledge, pressure in each chamber rises from 0 pounds gauge to between 62 and 72 pounds gauge (occasionally going to 80 pounds gauge) during the time that liquid carbon dioxide is being admitted into chambers." [198]

* * * * * * * *

Mr. Morris: I had finished reading paragraph (a) of the answer of May 29, '43, to interrogatory (20) before the recess.

(b) of that answer differs somewhat from the under-[201] standing of the learned counsel for defendants with respect to defendants' operation.

Paragraph (b) begins: "Defendant does not understand this interrogatory but volunteers the following: After the valve admitting liquid carbon dioxide is shut off

manually, the pressure in the chamber starts dropping and when pressure is down to between 10 pounds and 25 pounds gauge, the blowback line is manually opened to the atmosphere"—that is, the blowback line is immediately open to the atmosphere—" (instead of to the compressor.)"—

The Court: Mr. Miketta, as I understood you, you did not actually open the blowback line, but you opened another aperture to the atmosphere and kept the blowback line closed.

Mr. Miketta: May I draw a little sketch here to show the equivalency of that?

(Diagramming on blackboard). Here is the wall, we will say, of the chamber, and here is the so-called blowback line that goes to the compressor or back to the system. Now, that is open all the time. Here I have indicated a separate line to the atmosphere.

The Court: Correct.

Mr. Miketta: Suppose we were to do that (diagramming), then this is open all the time, while, let us say, that is closed; and that is what happens when nature takes its course and snow forms here. That gas goes to the rest of the system. After that pressure has dropped down, as I said, [202] to somewhere around 5 to 10 pounds, that is closed and this is opened to the air.

Now, here I have indicated two separate openings. Here you have two separate openings but they connect to the same chamber, you see.

The Court: The principle is the same.

Mr. Miketta: The principle is exactly the same, your Honor. This is simpler, perhaps, than manipulating two

valves. That is why I indicated it that way here. But the answer is the same.

The Court: All right. Now, let me see if I understand it. I have to understand these things as I go along. You have a valve on the conduit that brings material into the chamber, and you have a valve on the conduit that takes the gases that are not immediately being used in the process of solidification and that goes back to your compressors or your storage tanks or whatnot. It is to be used again.

Mr. Miketta: That is correct.

The Court: At the time that the injection of the CO_2 is taking place, you do not attempt to control the outlet; you just let nature take its course; it goes out as it wishes.

Mr. Miketta: That is correct.

The Court: When the man who is operating the device feels that the solidification process has proceeded far enough, he closes, first, the inlet valve, then he closes the outlet valve and he opens the valve which does not carry the excess [203] gases to the compressors or storage chamber but just disposes of it in the atmosphere.

Mr. Miketta: That is correct, your Honor.

The Court: There is no attempt at automatic control so far as this process is concerned.

Mr. Miketta: None at all.

The Court: Very well.

Mr. Morris: To finish the answer to paragraph (b) of interrogatory 20: "the blowback line is manually operated to the atmosphere (instead of to the compressor) to permit the remaining gas in chambers to blow off to the atmosphere."

I assume that that means the gases over and above the atmospheric pressure. I do not assume that he is creating a vacuum in there by opening that to the atmosphere. "Platens and rams are then manually operated as stated in answer to Interrogatory 19. Defendant does not know what pressure exists in the snow while it is being compressed into a block."

The Court: Suppose that you rub out those two green lines below the outlet conduit, as not being accurate. It might be confusing.

Mr. Miketta: All right, sir.

The Court: Mark your upper diagram "A", your middle one "B", and your lower one "C", and then we can keep track of them. Will you reproduce those on sheets of paper and mark them the next exhibits for identification, so that they will [204] be in the record here?

Mr. Miketta: Very well, sir.

The Court: We have been refering to them and we might as well have them in the record.

Mr. Morris: May I make an inquiry? I don't know whether counsel will want to answer it or not.

The Court: Well, ask them.

Mr. Morris: My understanding of the explanation of diagram C was that the valve in the blowback line is always closed when the valve in the branch to atmosphere is open.

Mr. Miketta: You are asking me about something, Mr. Morris, that takes place within the matter of seconds, and whether the operator closes one valve before he opens the other, or vice versa, it is almost a simultaneous operation as I have observed it. May I check that with the diagram that I drew?

Mr. Morris: Yes. I will proceed while you are doing that and you may tell me that later.

Mr. Miketta: I think you are absolutely correct, that this valve is closed before that one is opened.

Mr. Morris: "This valve" referring to the blowback line and "that one" to the branch to the atmosphere.

Very well, 21.

Mr. Miketta: I will do that later.

Mr. Morris: "(21) Is all of the liquefied carbon dioxide supplied to the chamber of any of said presses [205] converted therein into a solid? Or is part of the liquefied gas supplied to the chamber in each of said presses converted into a solid and the remaining portion of the liquefied gas converted into gaseous form?"

The answer of May 29, '43, is: "The answer to the first part of this interrogatory is in the negative; to the second part, in the affirmative.

"(22) Which of said chambers has connected thereto or associated therewith a conduit or pipe, or conduits or pipes, through which the portion of the liquefied gas supplied to the chamber that is therein converted into a gas, passes from said chamber?"

The answer of November 6, '42, is: "Exhibits 9 and 10 attached to defendant's answer of November 6, '42."

The answer of May 29, '43, is: "All of them."

The Court: Did that question mean the chambers in the three devices?

Mr. Morris: Yes, your Honor; in the three devices. Yes.

The Court: Yes.

Mr. Morris: "(24) In which of said chambers is the plunger or ram movable to press an accumulated mass of solidified gas into a block?"

Answer of November 6, '42, is: "Exhibits 9 and 10 attached to defendant's answer of November 6, '42."

And the answer of May 29, '43, is: "All of them."

"(27) In which of said chambers is said plunger normally [206] inactive during expansion of the liquefied gas and the accumulation of the solidified gas in the chamber?"

Answer of May 29, '43, is: "All of them."

"(28) Which of said chambers has connected or associated therewith means or apparatus for maintaining the movable head or closure member in chamber-sealing position, against opening under the action of pressures within the chamber?"

Answer of November 6, '42, is: "Exhibits 9 and 10 attached to defendant's answer of November 6, '42."

Answer of May 29, '43, is: "All of the chambers have a ram or platen associated therewith which will resist opening under the action of pressure within the chamber."

"(31) Which of said chambers is, during operation, vertically disposed?"

Answer of May 29, '43, is: "All of them."

"(33) Which of said chambers has a vertically disposed fluid pressure cylinder below it?"

Answer of November 6, '42, is: "Exhibits 9 and 10 attached to defendant's answer of November 6, '42."

And the answer of May 29, '43, is: "All of them."

"(34) Which of said cylinders has a vertically reciprocal plunger therein?"

Answer of November 6, '42, is: "Exhibits 9 and 10 attached to defendant's answer of November 6, '42."

And the answer of May 29, '43, is: "All of them."

"(35) Which of said cylinders has a chamber-closing head [207] mounted on the end of such pressure cylinder and vertically movable therewith between position closing an end of the chamber and a position opening an end of the chamber?"

Answer of November 6, '42, is: "Exhibits 9 and 10 attached to defendant's answer of November 6, '42."

The answer of May 29, '43, is: "All of them."

The Court: May I ask you, when you ask the question 33: "Which of said chambers has a vertically disposed fluid pressure cylinder below it?" you just mean the hydraulic chamber below?

Mr. Morris: The hydraulic apparatus, the hydraulic apparatus; that is right.

"(37) In which of said chambers is there a pressing plunger movable toward and from the closing head and in normally inactive position located in the chamber spaced from the closing head?"

Answer of November 6, '42, is: "Exhibits 9 and 10 attached to defendant's answer of November 6, '42."

The answer of May 29, '43, is: "This interrogatory is ambiguous. Defendant, interpreting this interrogatory very broadly, states, in answer thereto,—all of them."

The Court: All you mean is that, assuming that the closure is there and it is in a fixed position, temporarily, anyway, which one of them has some type of pressing plunger that compresses the material between the two, is that it?

Mr. Morris: All it means is that the plunger is [208] stationary during the operation, during the snowing or the solidifying operation, that is, there is a pressing plunger that is movable toward and from the closing head but is not movable in normally inactive position, located in the chamber spaced from the closing head. In other words, if your Honor will look at, say, one of the drawings, you will see in all of them, for instance, when that upper platen is in a stationery position at the top—

The Court: Yes.

Mr. Morris: And here the lower ram is in stationary position at the bottom, and that is spaced from the closing head in each instance, and we say: Is that your normal operation? That plunger is movable toward and from the closing head and in normally inactive position located in the chamber spaced from the closing head.

The Court: Of course, this question is not very clear. What do you mean by “normally”? Naturally, there are times when that pressing plunger is active. When the material is being formed it would be inactive.

Mr. Morris: That is right.

The Court: That is what you meant by the question?

Mr. Morris: That is what I meant.

The Court: Is that what you meant by the answer?

Mr. Miketta: Well, I guessed that that is what he was driving at, your Honor, and I think I answered it correctly. In other words, in inactive position the plunger is down at [209] the bottom spaced from the top. Frankly, it was a little ambiguous to me.

The Court: I wanted to be sure I understood. I did not think there was any question about it.

Mr. Morris: The answer of the learned counsel that the plunger is at the bottom means that he is referring to the two presses where the discharge opening is at the top?

Mr. Miketta: That is correct, Drawings A and B.

Mr. Morris: "(38) Which of said chambers has a means connected or associated therewith for supplying liquefied carbon dioxide to the chamber with the closing head in closed position and the pressing plunger in inactive position spaced from the closing head?"

That is a clarification, I take it, of (38).

The Court: That is right.

Mr. Morris: The answer of November 6, '42, is: "Exhibits 9 and 10 attached to defendant's answer of November 6, '42."

The answer of May 29, '43, is: "All of them."

Interrogatory "(39) Which is said chambers has associated therewith a closing head movable from chamber-closing position to a position spaced from the chamber, for unobstructed removal of a block of solid carbon dioxide from the chamber?"

Answer of November 6, '42, is: "Exhibits 9 and 10 attached to defendant's answer of November 6, '42."

The answer of May 29, '43, is: "All of them."

Will Dr. Jones take the stand, please? [210]

CHARLES L. JONES,

called as a witness on behalf of plaintiffs, being first duly sworn, testified as follows:

The Clerk: State your name, please.

A. Charles L. Jones.

Direct Examination

Mr. Morris: I am calling Dr. Jones not only as an expert—I shall probably ask him some questions as an expert, and calling him largely as a fact witness. I thought your Honor would be interested in knowing that before I begin, because it will answer some questions that would otherwise arise in your Honor's mind.

Q. Dr. Jones, would you be good enough to tell us your full name? A. Charles L. Jones.

Q. And your residence?

A. Edgewood, Pennsylvania.

Q. And your age? A. 48.

Q. The schools that you attended after high school?

A. The Allegheny College, University of Pittsburgh.

Q. And your occupations since that time?

A. Since that time I have been employed as a chemist and chemical engineer at Mellon Institute of Industrial Research; with the Dry Ice Corporation of America and its successor companies. [211]

I don't know if it is necessary to go into complete record as to dates.

Q. I called you "Dr. Jones." Was that an honorary title or was that one that you earned?

A. No; earned in the course of University of Pittsburgh, 1923.

Q. In what course was it given to you?

A. In chemical engineering.

(Testimony of Charles L. Jones)

Q. Dr. Jones, what did you do at the Mellon Institute? What was your occupation there?

A. Well, the occupation of principal interest in this case was that in 1922 The Compressed Gas Manufacturers Association—in passing, I call your attention to the name of the association—"The Compressed Gas Manufacturers Association," who were manufacturers of liquefied carbon dioxide, came to Mellon Institute and employed me to investigate possible uses for their product to try to find some way of expanding their markets for carbon dioxide. [212]

* * * * * * * *

A. (Continuing) In the course of this investigation of the uses for carbon dioxide we had occasion to investigate the properties of the material; and it was also suggested at the time, that these manufacturers might undertake to solidify some of their product and sell it for refrigeration. They did not, however, enter any such activity at the time and, in fact, the solid carbon dioxide industry was independently developed by others.

Following the connection with the solid carbon dioxide industry, I left that industry in 1934 and am at present in the steel business with the Firth-Sterling Steel Company.

Q. By Mr. Morris: Did you state the date that you went with the solid carbon dioxide industry?

A. I did not.

Q. Can you fix it approximately?

A. I was connected with it for approximately one year as a consultant in 1927; and then in 1928, until 1934, as chief engineer of Dry Ice Corporation.

(Testimony of Charles L. Jones)

Q. By the Court: What year were you speaking of when you were with the Mellon Institute and they wanted to expand their market?

A. The Mellon Institute work on carbon dioxide was started in 1922 and completed in 1924.

Q. By Mr. Morris: So that during that period, which was a three-year interval, between 1924 and 1927, you were not [213] directly engaged in connection with the business? A. That is correct. [214]

* * * * *

Q. By Mr. Morris: After you became associated with the Dry Ice Company of America did you become familiar with the apparatus that was being used for making solidified carbon dioxide generally? A. I did.

Q. Was or was not that apparatus so being used the same, or substantially the same, or different, from that being used by the Dry Ice Company of America in the plant in which you [215] were immediately engaged?

A. So far as my information goes, they were the only producers at the time, of which the Dry Ice Corporation was the principal one. I would say, therefore, that this method was the most widely used method in the industry at the time.

Q. That method was the snow tank method that you have referred to? A. It was.

Q. I hand you a photostatic copy of a photograph, and ask you if you know when that photograph was taken. His Honor has the original. There is a notation on the back of it. Can you tell me when it was taken?

A. I cannot, as to the exact date, no. It was taken in the Maspeth plant of the Liquid Carbice Company.

(Testimony of Charles L. Jones)

It bears the notation 1927, which was made at the time. The photograph has been in my possession ever since.

Q. Does that truly portray, in so far as it does portray, the apparatus in this patent?

A. I would say that is a typical installation of that kind of equipment, yes.

Mr. Morris: I offer it in evidence.

The Court: It may be received.

[Note: Plaintiff's Exhibit No. 5 will be found in the Book of Exhibits at page 1329.]

Mr. Miketta: I object upon the ground that the plant has not been identified yet, and the location.

A. Long Island.

Mr. Miketta: No foundation has been laid. [216]

A. Maspeth, Long Island, New York.

Mr. Morris: I think the witness had answered that.

The Court: Let me ask you one further question. You said at this time, of which you spoke, 1927, there were only two producers, of which this company was one?

A. Yes.

The Court: Did the other company use substantially the same type of apparatus?

A. I can't testify as of my own knowledge as to that particular time. However, I should say that they did not. To the best of my information they used an apparatus, at about that time, which was developed by the plaintiffs in this case, or by Cole and McLaren, rather, who were not then connected in any way with the Dry Ice Company.

(Testimony of Charles L. Jones)

Q. My Mr. Morris: You are referring to what corporation?

A. I believe it was known as the Carbice Corporation. That was our principal competitor at the time.

Q. Dr. Jones, will you be good enough to explain, please, by that schematic drawing, which I hand you, the operation in the plant in which you were engaged?

Mr. Foster: That is objected to, your Honor, unless the time is specified.

The Court: Objection sustained.

Q. By Mr. Morris: At the time you have described, as approximately the time that that photograph was taken.

Mr. Foster: That is objected to still as indefinite.
[217]

The Court: I think that is sufficient, unless it is shown that a year or two or three makes a particular difference. That can be brought out on cross examination. I think you may answer.

A. May I say that the method in question was already in use when I first had any connection with the industry, and although displaced by other methods, it continued in use to a greater or less extent for at least five years thereafter.

Q. By Mr. Morris: That is, up to about 1932?

A. Yes, sir.

Q. Or the end of 1932? A. Yes, sir.

Q. What part of 1932?

A. It doesn't make any difference. The end of the producing season, I would say.

Mr. Morris: I renew my offer; or is it admitted?

The Court: It is admitted.

(Testimony of Charles L. Jones)

Q. By Mr. Morris: Then will you please, Dr. Jones, proceed to tell me what this schematic drawing depicts or represents?

The Court: I would like to know what a schematic drawing is. That is something new to me.

Mr. Morris: I withdraw my question, and I will ask you what a schematic drawing is.

A. A schematic drawing, I would say, is a symbolic representation of the process, rather than an accurate [218] detailed drawing, such, for instance, where a valve is shown, and indicates, as for example, the liquid CO_2 is shown on the drawing, and it does not appear to be coming from anywhere. It may be a word invented to take advantage of possible omissions in descriptions and in drawings for court work.

Q. Could it mean this, Dr. Jones, that in an art or an industry, as for example, agreed upon by long usage, or otherwise, certain symbols are indicated to mean certain things?

Mr. Miketta: I object to that as assuming something not in evidence.

Mr. Morris: Question withdrawn, and I will ask you to answer the question I asked a while ago.

A. The drawing in evidence shows a snow tank, indicated in outline form on the righthand side. This is a fairly simple device, and was in use at the time. [219] It is simply a cylindrical sheet metal shell of double construction, having a screen or filter cloth at the upper end of the innermost shell, and mounted upon an ordinary platform balance. Liquid carbon dioxide was admitted at the point clearly indicated, and entering the snow tank was partially solidified; the balance of the unsolidified

(Testimony of Charles L. Jones)

gas passing upward through the filter cloth, and outward through a carbon dioxide outlet. . The tank was suitably insulated, and provided with a necessary safety valve.

In operation the formation of solid was continued until a desired charge was accumulated, usually 400 pounds, in the larger sized tank in use, and any desired quantity, according to the size of the tank.

This was then shoveled manually out of the snow tank into a steel mold. The mold was an open mold, commonly handled on a metal surfaced wooden bench. The mold was first tamped with a tamper of conventional construction, usually of steel, but at times of wood, and after having been tamped down once, additional snow was shoveled into the mold until it was again filled to the top, and again tamped down, and in some cases a third portion of snow shoveled into the mold. A loose top plate of ordinary mold steel was laid on top of the charge, and the whole assembly, the mold with its accompanying charge of solid, was pulled into position on an open hydraulic press of conventional design, where it was pressed to form a commercial tube of approximately [220] ten inches, or 10 by 10, which is the one commercially used at the present time.

Many of these presses were single end presses; that is, the mold rested on a flat lower plate, somewhat larger than itself, so that the pressing action took place entirely from one end, that is, by pressing the top plate down onto the charge. Others, such as the one illustrated here, had a movable lower platen, together with a track on which the mold advances shown in the form of angle iron on the drawing, and in this case, in order to get satisfactory density at the lower end of the block, the block was

(Testimony of Charles L. Jones)

squeezed from both ends, instead of one end. That is, as the lower platen raises, the mold would be called floating; it would assume whatever height the function of the block carried it to.

The Court: What is the object of the filter cloth at the top of this chamber?

A. Although it was very early recognized that CO₂ was desirable, in order to get a high yield and good quality of solid, and that was well appreciated by my predecessors in the dry ice company, equipment for producing such refrigeration was not easily available. In short, the early industry was pinched for money a great deal of the time. As a result, in most cases, the liquid carbon dioxide in this device was fed warm, I would say 60 degrees or 75 degrees Fahrenheit, ordinary room temperature.

Under such condition, when expanded into the snow [221] tank, the snow was very finely divided, and very easily entrained under high velocity jet of gas, so if the filter cloth were omitted it would be necessary either to proceed very slowly, or you would have an excessive entrainment of solid snow particles—a snowstorm.

The Court: Did this scale automatically close off the intake to the carbon dioxide?

A. There was nothing automatic about it.

The Court: What was the scale for?

A. To close the intake in the tank.

(Testimony of Charles L. Jones)

Q. By Mr. Morris: Where on the drawing it says CO₂ outlet, that is what has been called in this case the blowback outlet line?

A. It is marked CO₂ out. The position shown on the sketch is taken from the drawing of the Martin patent, which is, I believe, in evidence, but was variously placed in any suitable position in the snow tank.

Q. Could or could not the CO₂ outlet be choked up by snow?

A. It could, and on many occasion was.

Mr. Foster: I object to that as calling for a conclusion.

The Court: I assume he is here as an expert, and that they are entitled to ask him that. The objection is overruled.

Q. By Mr. Morris: Do you know whether or not the [222] safety valve could or could not be clogged by snow?

A. Yes, the safety valve when first—

The Court: That gets into the gentleman's objection. We don't want his personal experience. We want his opinion on the operation of the device.

A. The answer is yes.

The Court: Very well. There is also a certain amount of outlet for the CO₂ through to your filter cloth, isn't there? A. Yes.

Q. So you have that outlet as well as the lower one?

A. Your Honor, let me make it clear that all of the gas produced in the solidification process went upward

(Testimony of Charles L. Jones)

through the filter cloth and down through the annular space.

Q. It went up to that storage through the outlet?

A. The purpose of the annular space at the bottom outlet was to reduce the heat leakage from the surroundings in the room. In other words, it served as an insulating barrier.

Q. Then you had the safety valve, so that in the event the pressure got too great, it would keep it from doing any harm?

A. In case the snow clogged the outlet, the safety valve would relieve the pressure.

Q. But there were no other outlets at the corners, so that it could get out? It all went down and went out [223] through the outlet at the bottom?

A. That is correct.

Q. By Mr. Morris: Dr. Jones, what do the arrows at the top, going through the filter cloth, and then going right and left, indicate?

A. As I have just described, it indicates the passage of the gas through the filter cloth and down through the annular space.

Q. Did or did not that pathway on the left, that annular space run to the bottom on the left as well as on the right of that snow tank? A. It did.

(An adjournment was taken until Friday, May 5, 1944, at 10 o'clock a. m.) [224]

Los Angeles, California, Friday, May 5, 1944; 10:00
a. m.

(Parties present as last noted.)

The Court: You may proceed.

Mr. Morris: Take the stand, Dr. Jones.

CHARLES L. JONES,

recalled.

Direct Examination

resumed.

Q. By Mr. Morris: In answer to our last question, you said that the unsolidified gas passed through the filter cloth and then down the annular space between the walls of the chamber and walls of the jacket and out the "CO₂ out", as I understood you in your last answer of yesterday.

A. That is correct.

Q. Where does it go from the "CO₂ out"?

A. The carbon dioxide returns to the compressor system.

Q. What is the function of the compressor system?

A. The compressor system is employed in order to return the carbon dioxide to a liquid condition.

Q. And that requires what?

A. Two things: The application of pressure and the removal of heat. Pressure is applied in a compressor and the heat is removed in a condenser.

Q. At what pressure was the liquid supplied to the snow tank?

A. At the time the snow tank was employed, it was [225] customarily the pressure and temperature resulting from cooling with water, whatever temperature that happened to be.

(Testimony of Charles L. Jones)

Q. No. My question was, Dr. Jones, what pressure was that? A. Approximately 1200 pounds.

Q. Was that pressure reproduced in the snow tank? I think "reproduced" is not a very good word. Was the pressure at which the snow tank operated the same as the pressure under which the liquid CO₂ was delivered to the nozzle?

The Court: Do you mean was that same uniform pressure maintained in the tank?

Mr. Morris: Was that pressure maintained not only in the pipe leading to the tank, but was it maintained in the tank as well?

The Court: In the chamber?

Mr. Morris: In the chamber; that is right.

A. No; it was not. The purpose of the nozzle—

Q. What prevented it being so maintained, Dr. Jones?

A. The relative proportions of the nozzle and the outlet from the chamber.

Q. Very good. Was there any control of the liquid CO₂ from the compressor to the tank other than the nozzle and pipe?

A. Yes. There was a valve in the liquid line to shut off the snow tank.

Q. When was that valve closed and when was it opened in [226] the snow tank operation?

A. It was opened when the tank was empty and it was closed again when the platform balance showed that the desired weight of solid had accumulated.

Q. Is that valve in the inlet pipe illustrated or indicated in the drawing that you have in your hand, Plaintiffs' Exhibit 4? A. No; it is not, it is not.

(Testimony of Charles L. Jones)

Q. What pressure was maintained in the snow tank in operation?

Mr. Miketta: If the court please, in order to keep the record straight, are we to understand that all of these matters to which the witness is testifying relate to the operation of the snow tank at the plant of the American Dry Ice Company? Otherwise, I deem this line of questioning irrelevant and immaterial, no proper foundation having been laid.

The Court: Well, I had understood that that was the case; that he was simply talking about this particular operation in which he was engaged, which was one or two plants being used at that particular time. Is that correct?

A. Yes. If the court please, this type of operation was used in altogether some eight or ten plants; and the method, the general method is the same in all cases, with only minor variations.

The Court: Then, I think the objection is sound on foundation. I think maybe you had better ask some questions, [227] Mr. Morris, to clear that up for the record.

Mr. Morris: I will, and I want to clear up the eight and ten plants of today as against the two of yesterday.

Q. The eight and ten plants were being operated and controlled by how many companies?

A. One company.

Q. And that company was?

A. The company with which I was employed at the time.

Q. Very good. You were familiar with the operation in how many of those plants? A. All of them.

(Testimony of Charles L. Jones)

Q. The only operation of which you were aware that was carried on other than in one of those eight or ten plants was carried on where?

The Witness: The question again, please. I don't understand.

The Court: Read it, please.

(Question read by the reporter.)

Mr. Morris: I think that is a little complex. May I withdraw it?

A. That is clear. The only other operation was in the plant of the General Carbonic Company in Long Island City at the time first mentioned, that is, at the time of my first contact with the industry—leave it that way.

Q. Do you know how long that continued?

A. What is that? [228]

Q. Do you know how long the operation at General Carbonic continued?

A. The operation to produce solid carbon dioxide continued to the present day.

Q. By the company of the same name? A. No.

The Court: Just a minute. To make this record clear—I am not sure that I asked the question; I think maybe I did: Was the operation, as depicted on this exhibit, which should be given a number; temporarily, let it be admitted in evidence for the purpose of explaining the testimony of this witness, then we will have a number.

Mr. Morris: I think it is No. 4.

The Court: I don't think it has ever been admitted.

Mr. Morris: May I offer it then?

The Court: Yes, for the purpose only of explaining the testimony of this witness.

(Testimony of Charles L. Jones)

Mr. Morris: I am told, if your Honor please, this is No. 6.

The Clerk: Exhibit No. 6.

[Note: Plaintiff's Exhibit No. 6 will be found in the Book of Exhibits at page 1330.]

Q. By The Court: Was that operation, in each of the eight plants to which you referred, substantially identical with the operation which you have indicated here?

A. It was.

Mr. Morris: One further question:

Q. And it was the operation in those plants that you [229] have been talking about, and answering, with respect to the snow tank?

A. Yes; the description was based on the operation at the Maspeth plant, of the Liquid Carbonic Company, as so stated yesterday, and an approximately similar operation was introduced in the other plants, as required, for a period of some two or three years after.

Q. What was the pressure in the snow tank?

The Court: At what time?

Mr. Morris: While it was being discharged.

A. The pressure in the snow tank was approximately atmospheric. It did, at times, rise as high as ten pounds above atmosphere, but was limited to a very low pressure in three ways: First, the light construction of the tank itself, which was customarily constructed from sheet metal of not greater than a quarter of an inch in thickness, and sometimes less; second, it was equipped with a pop safety valve normally set to relieve the pressure at 15 pounds above atmospheric; and, third, through a direct connection to the low pressure suction of the compressor

(Testimony of Charles L. Jones)

system, which was capable of keeping the apparatus pumped down to pressures between atmospheric and ten pounds.

Q. What apparatus in or near the snow tank, if any, had a tendency to keep the pressure at the pressures you suggest? A. I just answered that question.

Q. Then I withdraw it, and I will ask you whether there [230] was a valve in the CO₂ out pipe?

A. There was a valve in the carbon dioxide outlet, and this valve was customarily closed during the time when the solid was being removed from the tank, in order to avoid the waste of carbon dioxide through gas coming from other tanks which might be discharged at the same time.

Q. The carbon dioxide coming from other tanks, if that valve were not closed, would enter the tank in question through what pipe?

A. Through the connection marked "CO₂ out" on the drawing.

Q. Then it would back up? A. Correct.

The Court: Then the purpose of that valve or outlet conduit was not to have any effect upon the pressure in the tank; simply to prevent the injection into the tank backwards of extraneous gases? A. That is correct.

Q. By Mr. Morris: Did the diameter of the outlet pipe have any function or effect upon the pressure in the chamber, and if so, how and why?

The Court: Again, at what stage?

Mr. Morris: During the operation, while it was being discharged.

A. Yes, the outlet, which was customarily, I believe, two inches in diameter, and which I have already stated

(Testimony of Charles L. Jones)

was [231] connected to the low pressure compressor suction, was normally adequate in size to keep the pressure in the snow tank to the desired low pressure. However, from time to time the outlet would become plugged, or partially plugged, with solids being formed. This constriction would result with rising pressure in the snow tank, until the pop safety valve, provided for the purpose, operated, holding the pressure at 15 pounds or less, as a rule.

Q. Why do you add the limitation, Dr. Jones, the limitation,—as a rule?

A. Well, on rare occasions the safety valve itself would plug up with solid carbon dioxide. [232]

The Court: The pop valve wouldn't pop.

A. The pop valve wouldn't pop.

Q. By Mr. Morris: What was the condition of the filter at that time?

A. The filter cloths, on some occasions, burst or perforated when the tanks would overload. I would not leave the impression that that was too common a difficulty, because, crude as it may seem, this apparatus performed its definite function in the development of methods in the industry, and in spite of its defects it did operate to produce a commercial product over a period of two or three years. Those were difficulties which were occasionally experienced.

Q. Will you describe the product produced by this apparatus? A. I would commence—

The Court: May I ask a question here before you go into that: As I understand it, you had someone around watching these machines at all times? You had someone who would watch them? A. That is correct.

(Testimony of Charles L. Jones)

Q. What facility did he have to determine the pressure in the tank so as to shut off the inlet valve if something was going to pop?

A. The tanks were provided with pressure gauges.

Q. Outside? [233] A. Outside.

Q. So he had to go to sleep before he got into any great amount of trouble?

A. I want to point out here that every time we had trouble with the material, one difficulty was due to the connection freezing with the material, with the operation of the pop valve.

Mr. Morris: I will withdraw my last question, and will ask you, before we reach the quality of the product, or its density, what was the character of the solid product formed in the snow tank?

A. The solid formed in the snow tank is produced by self-evaporative cooling, which we have described before. That is to say, a portion of the liquid carbon dioxide evaporates, reducing the rest of it to solid form. In this particular case, with the liquid warm at the point of expansion, resulting in a comparatively low yield of solid, and a high velocity of gases at the nozzle, and with the snow tank pressure low, the result is a very fine powdery form of solid carbon dioxide which somewhat resembles powdered chalk, although more fluffy in its characteristics, and more difficult to handle and compress in a uniform manner. The contents of the snow tank were, as has been described, shoveled into a mold.

Q. Before we get there, Dr. Jones, I want to ask you first, has all solidified CO₂ resulting from the self- [234] evaporative cooling process, the same characteristics? I

(Testimony of Charles L. Jones)

don't want any explanation now; I will ask you for that later.

A. No, it has widely varied characteristics.

Q. Do those characteristics affect the character or quality or texture of the ultimate block?

A. Yes, they do. [235]

Q. Now, you spoke of the yield, Dr. Jones, of solid produced in the snow tank. Will you tell me what the yield was and what percentage and upon what figures or facts you base that percentage yield?

A. I think that term should only be used when clearly qualified as to yield per pass, or the over-all yield; that is, if we were to attach to the tank shown a cylinder of carbon dioxide and manufacture snow from the material in the cylinder, we could determine a yield by dividing the weight of solid obtained into the weight of liquid used from the cylinder. That would be the yield per pass. The yield on that basis varies from about 15 percent to somewhat over 50 percent, depending only on the temperature of the liquid used and entirely without regard to what kind of apparatus is used or its design or manipulation. In the case of the snow tank as then used, because of the warm liquid carbon dioxide employed, the yield per pass was quite low and would vary from about 15 percent to as high as 30 percent. The over-all yield, on the other hand, is the net amount of solid produced over a period of time from the total amount of carbon dioxide gas used as raw material.

Q. That is, the initial cycle and succeeding cycles of the same gas through the tank?

A. The total figure for a period of time which, in order to be significant, should be considerable, that is, daily yield is frequently without meaning because the

(Testimony of Charles L. Jones)

amount of [236] material in the system at the beginning or end of the day might cause it to vary considerably; but I should say that over a period of a month or more, dividing the weight of solid obtained into the weight or amount of gas used would give a figure for over-all yield. On that basis the snow tank method initially showed a very poor result and it was not uncommon to have an over-all yield as low as 30, 35, and 40 percent of snow from the weight of carbon dioxide used. This was later increased and the method produced yields from 80 to 85 percent of snow manufactured from the same apparatus, depending upon mechanical efficiency and tightness of the system.

The Court: I do not think you have explained clearly for the record what you mean by the ideal or 100 percent in connection with your percentages.

A. The ideal over-all yield would be a case in which the leakage becomes zero and one pound of gas would produce one pound of solid.

Q. By Mr. Morris: The solid, passing now to the solid at the end of a cycle of operation of the snow tank, with the inlet valve shut off, what did the operator find when he removed the manhole cover?

The Court: Now, by "the cycle" you mean the time from the injection through the inlet conduit to the time that they closed off the escape conduit and opened the lid; that is the cycle to which you referred? [237]

Mr. Morris: I think that is exactly it. Might it be put this way: From the time of the opening of the inlet valve to the closing of the outlet valve?

The Court: Without relation to the lifting of the lid, because that is not taken out?

(Testimony of Charles L. Jones)

Mr. Morris: That is all. And I just wanted us to see what the operator saw when he removes the manhole cover.

A. He would be looking at a box packed with snow.

Q. With what physical characteristics?

A. Repeat the description just given; it would be light, powdery and chalky in consistency; and while possible to pack, it would not pack in the sense in which ordinary wet snow packs to form a snowball.

Q. How solid was it in the mass?

A. When properly filled, it could be easily shoveled without the use of other tools or other means to break up the mass; in other words, it was easily penetrated by the edge of a shovel.

Q. Did it come out in granulated form, like granulated sugar, or did it come out sometimes like blocks or lumps, or both?

A. Never like granulated sugar; always of very much finer particle size, more like, perhaps, slightly damp flour; and it came out in chunks.

Q. Then into what was it shoveled?

A. It was shoveled into a mold, and as described [238] yesterday, was tamped in this mold—

Q. Just, if you will pardon me, Dr. Jones. The mold into which it was shoveled is indicated on plaintiffs' drawing Exhibit 6?

A. Yes; it is.

Q. What was the purpose of tamping?

A. The purpose of tamping is twofold: First, and the common conception of the principal reason, is to expel the gases and air entrapped in the spaces between irregular chunks of material put in the mold. This is important, but even more important, it is necessary to distribute the

(Testimony of Charles L. Jones)

material in the mold so as to have a uniform packing at the start of the pressing process and to distribute the impurities more evenly, more particularly the water snow always associated with the product.

Q. Was the tamping a non-standard or standard practice?

A. Tamping was at that time a universal practice. Although individual blocks had been made experimentally without the method, the snow tank procedure commercially and over a period of time was always employed with the tamping process, because only in that way was it possible to supply the trade with a reasonably uniform and sufficiently dense product to meet their needs.

Q. Before we get to the character and quality of the final block, will you tell me whether there were any losses in the solid product from the time the manhole cover was [239] taken off until the ultimate block was produced?

A. There were. There was a loss of from—I would say, from 7 to 15 percent, and averaging about 10 percent of the material, lost in handling through shoveling in the open room and in tamping and in subsequently pressing in the open. I think it should be stated here also that all the figures obtained at the time are to some extent deceiving in that this process exposing the solid to the air varied considerably from day to day according to the relative humidity of the weather. On a very damp day a much larger amount of water snow would be condensed in the pores of the material during handling, and this had some desirable and some undesirable characteristics, but in all cases produced a false result as to the final product, that is, we were to some extent giving the customer a certain amount of water snow in place of the solid carbon dioxide which he thought he was getting.

(Testimony of Charles L. Jones)

Q. By The Court: Does this material have any particular affinity to moisture?

A. Yes; very definitely. Low temperature alone is sufficient to dry air considerably below the point where it could ordinarily be dried by calcium chloride, for example.

Q. By Mr. Morris: Are there any advantages or disadvantages in the snow tank operation at atmospheric pressures?

A. Yes. The first advantage was low cost of construction, and one of the main advantages of this method in the [240] early days of the industry was its low cost obtainable only in a low-pressure apparatus. That, however, is decidedly secondary to the character of the snow when it had to be handled or shoveled, because only with the low-pressure operation could a loose, fluffy material be produced which lent itself to manual handling.

Q. You did give me a moment ago, I believe, Dr. Jones, the percentage of average percentage of loss.

A. 10 percent.

Q. Will you define "subliming" or "to sublime"? What does it mean in this art?

A. The word, I think, in this or any art simply means the passage of a solid material directly to a gas without passing through a liquid phase.

Q. While I think of it, Dr. Jones, will you inspect the block of snow ice which was put into the courtroom just before the beginning of the session on day before yesterday and tell me its present status? Could I bring it around?

A. I am afraid I can't do that. It was not snow ice.

Q. I stand corrected. What was it, Dr. Jones?

A. This was the present commercial product. Had it been snow ice it would have disappeared long since.

(Testimony of Charles L. Jones)

Q. You find how much of the block left, expressed in pounds, approximately?

A. Oh, that is pretty difficult to guess that. I should say that there is possibly 5 pounds out of an original 50. [241]

Q. Very good. I see that the space around that is dry, notwithstanding the remainder of the block which weighed approximately how much when it was brought in?

A. 50 pounds.

Q. So we will say 45 pounds of it have disappeared and with no wet spot there; how do you account for that?

A. I would not account for it, because I believe there is a wet spot there. The tendency of the material to condense moisture from the atmosphere has had its effect here, and because of the air conditioning in the court, the moisture content here is not high enough to produce very much, but there would be some frost, enough to moisten it.

Q. You mean that as a cold water drinking receptacle sweats on the outside in a warm day?

A. Precisely. The moisture, in other words, was not in the product.

Q. Now, Dr. Jones, will you tell me why there is not a puddle of water there and what event has happened to keep that from being quite wet there?

A. Well, the principal change is the introduction of the Cole and McLaren press in the industry.

Q. No; I don't want to come to that yet. Can you give me an answer using the word "sublime" in any way? Has it melted, has it sublimed, has it vanished?

A. The carbon dioxide has sublimed, but the carbon dioxide, in any event, even though it melted, would not leave [242] a spot of water on the floor since obviously it is not water.

(Testimony of Charles L. Jones)

Q. Then the solid has sublimed into what, if not a liquid CO₂, into what?

A. Into carbon dioxide gas.

Q. Very good. Now, will you be good enough to describe the character, quality, texture, density, of the snow tank ultimate product, the block?

A. The final product in the snow tank varied in its height from time to time, according to the human element involved in the operator's tamping and filling of molds, from about 9 to 10-½ inches in height. The weights of the blocks varied from about 36 to about 45 pounds. However, on the basis of a 10-inch cube, which is a customary size, as stated to the trade, the product averaged 40 pounds per block, 10-inch cube. This corresponds to a specific gravity or density of about 1.2; that is, the block was about 20 percent heavier per unit of volume than the corresponding volume of water.

Q. By the Court: That is, using the maximum density of water as the standard? A. Yes.

Q. Of 1.2? A. Yes.

Q. By Mr. Morris: Were such blocks available for use or shipment to distant markets?

A. No; only within narrow limits. They did at that time [243] undertake to ship as great distances as from New York City to Philadelphia, by truck, and for a shipment of that kind where a time period of only perhaps eight or ten hours was involved between the shipment and the delivery, the product was, although not good, good enough to get by under the conditions then obtaining. However, it was not suitable for shipment by refrigerated freight car over larger distances, nor for holding a long time; and the customery practice in the industry was to

(Testimony of Charles L. Jones)

spare no effort to sell it as rapidly as possible after it had been manufactured.

Q. Is there anything else that you can tell me with respect to the texture of such blocks in so far as its texture or quality affected its commercial value?

A. Yes. It did vary from time to time according to the moisture content which varied with the weather, according to the perfection obtained in tamping, which varied with the particular man who happened to have tamped the mold, and with the condition of the mold itself, which would produce one result when used warm at the beginning of a day's run and a quite different result after it had stood in a moist atmosphere until it was thoroughly coated with water ice, resulting in a much greater friction along the walls of the mold during the pressing operation, the net result being that the density was not constant; that there was a variable amount of water snow included which was not always evenly distributed, and this, when the product was cut into [244] small pieces by band-sawing resulted in a variation in the rate of evaporation of these pieces, and also in the varying in the sawing loss, which caused rather frequent complaints from customers. [245]

The Court: Wasn't there another element of variation in the handling from the snow tank to the mold—the facility with which that was done?

A. Yes, some operators are much more skillful than others, and get a different result.

Q. By Mr. Morris: You spoke about density a while ago. I think you did not tell me whether the 1.2 was the general average density of a number of blocks, or whether the density of the block throughout one block was affected by that approximate density. Will you do so now?

(Testimony of Charles L. Jones)

A. I gave the figure as a commercial average over a considerable period of time. It would not indicate the variations in individual blocks. However, until late 1927 the double-ended feature of squeezing the blocks from below as well as from above, was not in the picture at all. For blocks pressed from one end there was naturally some variation in density, due to the mold wall friction, so that the end of the block nearest the moving platen, which in this case was the loose plate, was approximately 10 per cent higher in density than the material in the same block at what we call the dead end of the block.

Q. Was that density of a single block affected by the perfection, or lack of it, in making equal distribution of the snow in the mold before it was pressed?

A. Yes; although the effect of poor tamping is more apparent when the moisture content is high than when the [246] moisture content is low.

Q. That is a noticeable difference, a commercial difference, or a practical difference? What would you say as to that, Doctor?

A. I would say when an effort is made to improve the product by increasing the density, that is, by pressing harder, these differences in the moisture content and in the tamping become increasingly apparent, so a poorly tamped block, when pressed to maximum density, results in a broken block in many cases, sometimes an exploded block, and faults, fissures, and uneven water in the distribution gets an increasing chance to show up when the block is pressed to the maximum. We avoided this commercially by simply abandoning the effort to get a high density, and compromised on a density of approximately 1.2, and at that density the block was well enough con-

(Testimony of Charles L. Jones)

solidated to look well, but not sufficiently pressed to reveal to the customer the flaws which were actually present, nevertheless.

The Court: What was, approximately, the density of that block? A. 1.5.

Q. By Mr. Morris: And, theoretically, the density of CO₂ solid is what? A. 1.56.

Q. What can you tell us about the cost of the manual labor from the time of beginning to remove the man-hole [247] cover on the snow tank to the completion of the block of snow tank snow?

A. The labor cost by this process was very high. I want to specially avoid leaving any impression with the court that this process was without merit. On the contrary, it was very helpful to the industry in getting started, and, obviously, when the market was so small that it was not even possible to sell at all times as much material as one man would be able to shovel out and tamp in this mold, the inefficiency of the process was of no consequence whatever. It would take at least one man to make the product by any process.

Q. Will you tell me what the cost of the manual labor was?

A. However, to make a fair comparison, it would perhaps be better to take a plant making a considerable amount of product, and for that purpose I want to take the Elizabeth plant, of the Dry Ice Corporation, which was the first operation of any size to make use of the process, and at that plant the snow room labor cost, which includes only the operation of emptying tanks, tamping, the price varied between about \$6 and about \$9 per ton of dry ice produced, averaging about \$7. With larger

(Testimony of Charles L. Jones)

production, no doubt these figures could have been reduced somewhat.

The Court: What percentage would that be of the manufacturer's selling price? [248]

A. As of that time?

The Court: Yes.

A. That would be about 10 per cent, I think.

Q. By Mr. Morris: That is, the sales price as of those dates was about \$70 a ton?

A. That depends upon just what year you are talking about. The sales price initially was higher than that, and was steadily reduced to the trade as fast as the advance in the industry permitted, and so I would say it would be less than 10 per cent perhaps in 1927, and possibly more than 10 per cent when the price situation became different.

Mr. Miketta: May I ask, your Honor, that the witness identify when the Elizabeth plant was actually in operation, because we haven't heard about that plant before?

The Court: Yes.

A. The Elizabeth plant was completed and placed in operation in 1928, and was operated for a period of only four years before it was considered to be obsolete, and was replaced with other facilities.

The Court: How many separate snow tanks did they have at that plant?

A. They had three benches of four tanks each; that is, 12 snow tanks.

Q. You would operate four tanks on one press?

A. That is correct. Actually, during most of the period that plant was operated, there was one extra tank on [249] each bench, and three of them were actually used, and the fourth was in stand-by condition so in case of any repair it could be taken care of.

(Testimony of Charles L. Jones)

Q. By Mr. Morris: Will you give us in dollars the approximate amount of loss resulting from the open-air operation of shoveling snow out from the snow tank into the open mold and placing the open mold into the press?

The Court: Will you read the question?

(Question read by the reporter.)

The Court: You will have to change the form of your question. You haven't any relationship of dollars to the product.

Mr. Morris: I think he said it was about 10 per cent. I think he testified it averaged about 10 per cent loss of the solid.

The Court: He did not say loss; he said cost; that the labor, the cost of that operation, was about 10 per cent of the wholesale or manufacturer's sales price.

Q. By Mr. Morris: Dr. Jones, have you testified as to the percentage of loss of solid due to the handling of the product from the snow tank to the ultimate block?

A. There was an earlier question to that effect.

Q. Your answer was what?

A. I said that it varied from about 7 to about 15 per cent, an average of approximately 10 per cent loss from the snow weight on the scale in the tank to the finished [250] product weight on the shipping platform.

The Court: The answer is more clear now as to the cycle he was describing.

Mr. Morris: I was going to ask him that. Has your Honor the question now in mind?

The Court: The only thing I objected to was the form of that question. I don't think it would mean anything to me. Now, I understand.

(Testimony of Charles L. Jones)

Q. By Mr. Morris: I think probably the record shows enough. I will ask this one question: Can you translate that into dollar losses, Dr. Jones?

Mr. Miketta: No foundation has been laid to indicate that this witness knew the cost at the Elizabeth plant.

The Court: I don't think we have the standard. If it is purely a question of what the loss was per ton at \$70.00, it simply means a computation, which any of us can do, but if it is anything else, no proper foundation has been laid.

Mr. Morris: I will withdraw the question.

The Court: Mr. Morris, I know it is hard to ask questions; you get tired; and whenever you want to take a recess just say so. I usually run along until 15 minutes after 11. But it makes no difference to me.

Mr. Morris: That is very kind. I think perhaps if I can ask one or two more questions I am through with the snow tank and the snow tank operation, before we go into [251] the Cole and McLaren, and there might be a good time to stop.

Q. Dr. Jones, do you know of any snow tanks in operation in the industry anywhere in the United States today? A. No, I do not.

Q. What was the last one in operation that you had any knowledge of?

The Court: You are speaking now commercially?

Mr. Morris: Yes, your Honor.

A. So far as I know, the last snow tank passed out of use in 1934.

Q. What apparatus supplanted it?

A. The vertical press, known as the Cole and McLaren press.

(Testimony of Charles L. Jones)

Q. How close was it in structure and function to Figure 5 of the Cole and McLaren patent here in issue?

A. Except for details of hydraulic operating valves and hydraulic connections, I should say it was practically identical.

Mr. Morris: Now I am going into Cole and McLaren. I can do that either now or after the recess.

The Court: Suit yourself.

Mr. Morris: Very good. Then I will ask one more question:

Q. Dr. Jones, you spoke of self-evaporating cooling, in which the solidification of a portion of the carbon [252] dioxide was effected by the evaporation of the remainder. How many operations or methods of such self-evaporating cooling are there?

A. There are at least six, possibly more, different ways in which solid carbon dioxide can be made from liquid, each one producing a different product of characteristics as different, let us say, as crushed rock for road use is from fine sand or clay used in the ceramic industry.

Q. As a practical proposition, how many of these self-evaporating cooling methods can be carried out in the snow tank, which we have been discussing?

A. I think that might be clear by stating what would happen in a snow tank specially constructed, made sufficiently strong, if the conditions were somewhat changed. That is, let us suppose we have such a strong snow tank, and steadily increased the pressure during the snow forming operation. As this pressure is increased the temperature at which the solid is formed is also increased. At the same time the velocity of the unsolidified gases is steadily

(Testimony of Charles L. Jones)

reduced, because the same amount of gas can be taken away and compressed into a somewhat smaller volume.

At the same time the crystal size of the snow is steadily increased, because with the lowered velocities and high yield, the individual droplets of the liquid entering the tank are somewhat larger, and have sufficient time to form larger aggregates. [253]

This can be demonstrated in many ways, and gives a steady progressive change in the character of the snow which is formed, until, as the pressure rises we reach the melting point or triple point of the carbon dioxide, which is formed at approximately minus 70 degrees Fahrenheit, or approximately 40 degrees above the freezing point at atmospheric pressure, and under a pressure of approximately 60 pounds above atmospheric. That is, when a pressure of 60 pounds is reached, for the first time we will have no longer dry snow, but we will have damp and moist snow. We can then, at the same pressure, of 60 pounds, by merely varying the rate at which the gas is taken away, produce a whole series of products ranging from damp snow, such as in the case of water snow, which would make a fair snowball, or from wetter to wetter snow, slush, and eventually, still at the same pressure, products which would deposit in the tank a bath of liquid carbon dioxide, carrying in suspension only a few crystals of solid, corresponding, let us say, to a pond or puddle into which a little bit of snow has fallen at the freezing point of water.

If we continue to raise the pressure, at every pressure above the triple point the tank will be filled with a bath of clear liquid carbon dioxide, containing no solid whatsoever. Observe, however, that not only the carbon dioxide, but

(Testimony of Charles L. Jones)

also all of the solid impurities, that is, water, oil, or any other materials that may be present in [254] the form of impurities, are also varying their characteristics at the same time that the solid varies. That is, a condition which produces very fine snow also produces very fine subdivision of any frozen water or oil, and a condition which produces very coarse snow would produce coarser water or oil. When we pass the triple point, and commence to fill the chamber with liquid, we are still freezing the higher impurities, so the oil and water are solidified, and the carbon dioxide may be a clear liquid. All of those factors have a definite influence on the product manufactured.

In order to make solid in this fashion from a bath of liquid it is then necessary to close the liquid carbon dioxide inlet and reduce the pressure, boiling off the bath of liquid, and leaving a solidified portion in the tank. However, if these operations were to be performed in a snow tank specially constructed to withstand pressures, we would then have the problem of getting the material out of the snow tank, and we would find that in our series of products, made at increasing pressure in the snow range, we could shovel them out satisfactorily and use them. The slush range products, however, which were made with wet snow, would be cemented together by the formation of crystals in the liquid bath so as to be considerably more coherent, and the liquid products made above the triple point would also cohere into a mass so that it would be necessary to use [255] perhaps a crow-bar, perhaps some mechanical handling equipment; certainly it would be necessary to use some special scheme for getting that material out of the snow tank, and we would probably be somewhat limited in the range of boiling rates

(Testimony of Charles L. Jones)

which we could employ to make products which might be handled at all. Is that clear?

The Court: I think so; I am not sure, so I will ask the reporter to read that back. Of course, I suppose, as a practical matter, in answer to that question, you could say, could you not, that the product to be produced in the snow tank could be varied, depending upon the change in velocity of the carbon dioxide at the inlet, the variation in pressure and the change in the size of the aperture at the valve outlet? A. Correct.

The Court: When you have said that you have said about everything, haven't you—temperature, to some extent?

A. Yes, you have, only there are several products of primary industrial importance that could not be made in the snow tank at normal variation in the snow tank.

The Court: I am only attempting to say, by those changes you are bound to change the product that is made in the snow tank, isn't that correct?

A. That is correct, but it is not fully understood until at the same time you recognize three classes of such snow products, [256] the moist and slush products, and the so-called triple point product made by boiling off a bath of liquid.

The Court: As a preliminary explanation, those are the facts, are they not? A. Yes.

The Court: With that understanding, let us have the question read and the answer, and we will see if we understand it.

(Question and answer read by the reporter.)

Q. By The Court: When you talk about the triple point you mean the melting point of the carbon dioxide at

(Testimony of Charles L. Jones)

approximately 70 degrees Fahrenheit?
[257]

A. Yes, sir.

Q. By The Court: Now, then, without going into details, and taking into consideration the variations which we were talking about before, what you say is practically this: That if you increase the weight and strength of the shell so as to withstand higher pressure inside the tank, that as a laboratory experiment you could make quite a wide range of products?

A. That is right.

Q. As a practical matter, the snow tank was only designed for the purpose for which it was really used?

A. Correct; that is correct.

The Court: We will take our recess.

(Short recess.)

Q. By Mr. Morris: Then, the number of self-evaporating cooling methods for which the snow tank was practically applicable and adapted was what?

A. Only one.

Q. Only one; and that one was what?

A. That one was the customary method, low-pressure formation of dry, powdery snow below the triple point.

The Court: May I ask one question to be sure that is clear before we leave that?

Q. As a practical matter, this snow tank was designed to have the carbon dioxide injected at high pressure and diffused to atmospheric pressure, to operate more quickly, more efficiently, to accelerate the operation, and produce [258] the product that you wanted?

A. No; I would not say that it was constructed that way in order to produce it more quickly and more efficiently. I would say that—

(Testimony of Charles L. Jones)

Q. Leave the "more efficiently" out entirely, then.

A. Well, I would not even say that it was constructed that way in order to make it more quickly, because it does not make it any more quickly than the other processes; in fact, it is rather slower. However, I would say that in the early days in the industry, I think anyone who had connection with it would be quite willing to admit that we did not always know what we were doing, and in the case of the snow tank it was a scheme which, at the time and for the market that we had, it worked; it was not too expensive to manufacture; it was constructed of light metal parts; and it could be put together rather quickly and obtained almost anywhere, and its apparent inefficiency is, to some extent, offset by the fact that it was easy to construct and almost anyone could be taught to operate it. It did not seem to be highly dangerous; it did not seem to involve very many chances. In other words, it is the first affirmative step, if you wish, in the industry, and was particularly useful in opening up a market where you might have only a demand for a small quantity of material and you might not want to get into anything more expensive than that.

The Court: Thank you. [259]

* * * * *

Mr. Morris: Very good. Strike out the previous partial answer.

Q. Dr. Jones, you have read and are familiar with the patent in suit? A. I am.

Q. Have you Fig. 5 thereof before you? If not, I will get it for you. You have told us approximately when that apparatus went into operation?

A. In the fall of 1928.

(Testimony of Charles L. Jones)

Q. And you have told us that it had supplanted the snow tank apparatus—to what extent and when?

A. Perhaps it would be clearer by taking it by seasons. It is customary always to plan the producing apparatus during the winter season to supply the trade for the big season in the summer.

Q. If you can tell me in years without regard to seasons, Dr. Jones, I would be obliged to you.

A. All right. Then, by years, commencing immediately with the '28-'29 season, all production facilities which went into points requiring carload shipment to remote markets used this type of apparatus in 100 percent of cases, since only in this apparatus could we make a product suitable for such shipment—

Q. To what extent— [261]

A. In other plants, the introduction was somewhat slower, and there were even some additional snow tanks put into service in 1929 and 1930. However, by about 1933 about 90 percent of the industry was using the vertical closed press and not more than 10 percent of the product sold was made in other forms of apparatus.

Mr. Miketta: I beg your pardon, Mr. Morris. I move to strike the answer, your Honor, unless the witness positively identifies what apparatus he is referring to, because he has simply referred to a "type of apparatus."

The Court: You may examine him on voir dire, if you wish.

Mr. Miketta: May I do that at this time?

Mr. Morris: No.

Q. You have heard the statement of learned counsel for the defendants. Will you explain what you meant by "type of apparatus"?

(Testimony of Charles L. Jones)

A. Well, I was compelled to refresh my memory this morning by referring to a survey which I made in December, 1933, and at that time reviewed the plants then in operation and operated, I believe, by four or five different manufacturers, as to the particular manufacture of the presses employed by them. They were all vertical closed-chamber presses of the general type shown in Fig. 5. They were not all identical with it.

Q. Wherein did the apparatus to which you refer differ in element or function from the apparatus illustrated in [262] Fig. 5 of the patent in suit?

A. Referring back to the survey which, as I said, I made in '33, at that time I was able to count 55 presses or apparatuses then in use, of which I think I had personal knowledge or had seen about 45 of them, or the greater part, but not all, we will say. Of those presses 50 were the vertical closed type and, I believe, 12 of the 50 were manufactured by the Frick Company and were the inverted form of press which is indicated schematically, if that is the word, by the diagram marked B on the blackboard.

Q. Plaintiffs' Exhibit No. 3; is that what you mean?

A. Yes.

Mr. L. S. Lyon: No; that diagram on the blackboard.

Mr. Morris: Oh, very well. Proceed.

Mr. Miketta: May the court please, I have had a draftsman try to reproduce the sketches A, B, C on a placard, and I notice that he has filled in the little squares which we have indicated as representing the means for operating—

The Court: The hydraulic equipment.

Mr. Miketta: Yes. But I believe those follow A, B, and C as we have sketched them, except that C has been

(Testimony of Charles L. Jones)

completed on both sides. So that if the witness cares to refer to this, he may.

The Court: Yes. Let them be marked for identification as the defendants' next exhibit in order.

The Clerk: A. [263]

[Note: Defendants' Exhibit A will be found in the Book of Exhibits at page 1357.]

Q. By Mr. Morris: Will you complete your answer, Dr. Jones? That is, you spoke about 10, I think.

A. My answer, then, was—it can be read back. It is complete.

Q. I beg your pardon? A. I completed it.

Q. The remainder of the number were of what type?

A. There were 5. One was a European apparatus known as the Carba process; two were snow tanks; and I would have to refer to my original letter to know just what the other two were.

Q. Yes. Dr. Jones, I had in mind the remainder that you speak of as being of the type of Fig. 5. A. Oh.

Q. And not the make of the other types.

A. Well, I would say that as to all important features they were the press of Fig. 5.

Q. All right; very good. How many of the self-evaporative cooling methods can be carried out in the apparatus of Fig. 5? A. All of them.

Q. And the number you give us is what?

A. May I have that book? I believe there are eight listed there. The subdivision is more or less arbitrary.

(Testimony of Charles L. Jones).

Mr. Miketta: May I inquire as to what the witness is referring to? [264]

A. Nine. There are nine different methods or schemes of depositing a solid of different crystal structure and different form, with various pressure cycles; and the answer is that all of them can be practiced in the vertical press of Fig. 5.

The Court: The question is: What is this that you are referring to?

The Witness: Oh.

Q. By Mr. Morris: The book to which you refer is what?

A. The book to which I refer is Quinn-Jones.

Q. Published when?

A. In 1936, by Reinhold Publishing Corporation.

Q. Who is the Jones that you refer to when you say it is Quinn-Jones book? A. Myself.

Q. The title of the book is what?

A. Carbon Dioxide.

Q. You referred to pages 206 and 207?

A. I do.

Q. Do you recall when you first saw this apparatus?

A. Yes. I saw the apparatus in the Long Island City plant of the General Carbonic Company, either late in November or early in December of 1928. [265]

* * * * *

Mr. Morris: He has told us partly in the answer already given; that is, they were unsatisfied with the blocks that could be produced in the snow tanks, that were not available or adaptable for shipment to the more distant markets, as the witness has told you. Dr. Jones himself

(Testimony of Charles L. Jones)

was engaged in trying to find how to make a better product. Dr. Jones himself had, in his own laboratory or cellar, made what is referred to as triple point ice in a pipe. Dr. Jones was seeking to find some practical apparatus, thinking of how some practical apparatus could be made, that would make triple point ice practically and commercially. He did not know of any apparatus that could do it. I am telling you what he has told me. [267]

* * * * *

Q. Dr. Jones, had you before you saw the vertical apparatus of Fig. 5 of the Cole and McLaren patent endeavored to make triple point ice experimentally?

A. Yes.

Q. Triple point CO₂ ice?

A. Yes; and I had made such products.

Q. In what?

A. By filling a piece of pipe with liquefied carbon dioxide and boiling it off, removing the triple point crystals so formed and placing them in the mold of the snow tank apparatus, and finding, somewhat to my surprise, that it was not necessary to tamp crystals of that character because they would slide more readily over one another, did not tend to pack in quite the same way, and it was possible [268] to simply throw crystals of that kind into the mold, bring pressure to bear on them, and get the required density, without the defects in the block showing up.

Q. In making triple point ice is the pressure held constant or not; in making triple point CO₂ solid is the pressure held constant or not?

A. I should say that it may or may not be during the filling operation, but during boiling down it is automatically held absolutely constant at the boiling point, or at the melting point, rather, of the carbon dioxide.

(Testimony of Charles L. Jones)

Q. What kind of pressure do you call that?

A. That is triple profit pressure.

Q. In the operations that you described earlier this morning is or is not the pressure held constant, or approximately so, in the snow operation?

A. Yes; it is held constant.

Q. Do you use any other term for that?

A. Other than "constant"?

Q. Yes. A. Do you mean just another word?

Q. Yes. A. To express the same idea?

Mr. Foster: Objected to as immaterial.

The Court: Well, I can't tell. He may answer, if he can.

A. Definite, exact, approximately uniform, steady.

Q. By Mr. Morris: Had you been able to find, Dr. Jones, [269] any apparatus in which the triple point carbon dioxide solid could be made before you saw the Cole and McLaren press?

A. We knew of no such equipment commercially available to us. We naturally started at once to study, speculate as to what kind of equipment we might get for that purpose, and we had done a good deal of thinking about it but we did not actually have any equipment available for that purpose until the Cole and McLaren machine came out.

Q. What was your remark when you saw the Cole and McLaren press, vertical press?

Mr. Miketta: That is objected to, your Honor, as being immaterial.

The Court: Objection sustained. The objection was sustained.

(Testimony of Charles L. Jones)

Q. By Mr. Morris: Where was this Cole and McLaren press which you saw?

A. That is already in. The General Carbonic Company's Long Island City plant.

Q. What were the circumstances under which you went over to see it?

Mr. Foster: Objected to as immaterial.

The Court: Objection sustained.

Q. By Mr. Morris: Did you examine the apparatus when you saw it? A. I did.

Mr. Morris: In order that we may refer to them as an [270] exhibit, may I have them marked as plaintiffs' exhibit No.—

The Clerk: 7.

Mr. Morris: 7.

The Court: 7, collectively.

[Note: Plaintiff's Exhibit No. 7 will be found in the Book of Exhibits at page 1331.]

Mr. Morris: Collectively, there being 9 sheets. I don't know whether your Honor wants to go into this fully, or will you break in?

The Court: No. I think we had better take care of the noonday recess now. These can be marked collectively as one exhibit, because they have the headings "I, II, III, IV" etc., already down to "IX".

At this time we will adjourn until 2:00 o'clock.

(Whereupon a recess was taken until 2:00 o'clock p. m. of the same day.) [271]

Afternoon Session.

2:00 O'Clock.

The Court: You may proceed.

CHARLES L. JONES,

recalled

Direct Examination

resumed.

Q. By Mr. Morris: Dr. Jones, I ask you to refer to chart I of Plaintiffs' Exhibit 7 and explain what that is.

Does your Honor care to work with this or with that (different sized diagrams)?

The Court: No; this is all right.

A. Chart I of Exhibit 7 is a schematic drawing of the chamber of the Cole and McLaren press, with its immediately associated parts, showing the positions of the parts of the structure at the end of the cycle. In this drawing the upper plunger is shown as in its lowermost position—

Mr. Foster: Pardon me, your Honor. I have an objection I want to interpose. Unless the witness is referring to the Cole and McLaren device as being the device described and illustrated in the patent in suit, objection is made and motion to strike his answer is made on the ground it is immaterial.

The Court: Yes. I think the question should be made more specific.

Q. By Mr. Morris: Considered as a whole, what do the nine— [272] question is withdrawn and I will put it in leading form. Are these nine drawings of plaintiffs'

(Testimony of Charles L. Jones)

Exhibit No. 7 drawings to illustrate the vertical structure of the Cole and McLaren patent in suit, indicated and illustrated by Fig. 5 of that patent? A. They are.

Q. You may continue your answer, if you had not finished.

The Court: Just a moment.

Mr. Foster: If the court please, I object to the continuation of his answer on the ground that the charts are not yet identified as illustrative, as being exactly of the device illustrated and described in the patent in suit, and therefore immaterial.

Q. By Mr. Morris: Wherein, if at all, does chart No. I of Plaintiffs' Exhibit No. 7 differ or depart in any way from the apparatus of the patent in suit?

A. Comparing Fig. 1 of Exhibit 7 with Fig. 5 of the patent in suit, the upper and lower hydraulic cylinders are omitted, no tie rods are shown, the dividing member 110 of the patent is omitted—

The Court: Well, I don't believe that it is necessary for us to tear it down. As I understand it, these are in effect, by drawings, by schematic drawings, analyses of the various elements of Fig. 5 of the patent in suit; is that correct? A. That is correct. [273]

The Court: All right; then go ahead with your answer from there.

Q. By Mr. Morris: In different stages of the cycle of events in the operation of the plant?

A. Yes; that is correct.

Q. All right. Then, will you continue your answer to Fig. 1?

Will you pardon me just a moment?

(Testimony of Charles L. Jones)

What do the positions of the various parts of the apparatus in drawing No. I of Plaintiffs' Exhibit 7 indicate?

A. They indicate a block of solid carbon dioxide has just been removed from a press having its parts in the positions shown.

Q. What is the valve position in the CO₂ inlet?

A. The CO₂ inlet is closed.

Q. The valve position in the high-pressure and low-pressure channels?

A. In this drawing both high and low-pressure are shown as closed. Low pressure, however, might optionally be opened or closed at that point.

Q. Speaking as a whole, these charts are intended to indicate the different stages of operation, are they, or are they not, during the cycle of events of making a single block of ice?

The Court: Read that question, please.

(Question read by the reporter.) [274]

Mr. Morris: Question is withdrawn.

And I will ask whether this indicates the cycle of events as illustrating the actual use of the apparatus of plaintiffs?

Mr. Foster: That is objected to as immaterial, unless the question is confined to the operation as described in the patent.

The Court: Objection is sustained. Now, let us just take one drawing at a time. This drawing I of Exhibit 7 shows the plunger at the end of one cycle of operation, does it not? A. That is correct.

The Court: All right; now let us go on with the next one.

Mr. L. S. Lyon: If I may add this: We would like to have it appear from the witness' testimony that these dia-

(Testimony of Charles L. Jones)

grams are showing and illustrating how the press is actually employed in commercial operations in the plants with which the witness is familiar. These are to show just how the press is operated in making ice when the press is actually commercially used. It does not make any difference whether there is any such description in the patent. This is not in variance with the patent in any way, but we have a patent here on a device. Now, we are entitled to show to the court and for the record how that device is actually operated in commercial use. I think the witness has not been given an opportunity to testify for the record that [275] these drawings are to explain to the court just how this apparatus is used commercially.

The Court: My objection was to the order of proof. It seemed to me that in order for me to rule intelligently on it he has to go through these various articles.

Mr. L. S. Lyon: That is right.

The Court: And show what they are, and then ask him the generic question.

Mr. Morris: Very well.

The Court: Otherwise I think the objection is sound.

Mr. Miketta: If the court please, I would like to object to the use of Exhibit 7, moreover, on the ground that it has not been stated that this is a true or correct representation of what is shown in the patent. No foundation has been laid for this Exhibit 7 so far, and it is irrelevant and immaterial, because the suit is brought on a patent and not on a machine which is being used in some unknown plant and constructed by some unknown persons, and which is not before your Honor.

The Court: That was the basis of my hesitation at the question at that stage of the game. So far, here is what

(Testimony of Charles L. Jones)

the record shows: The record shows the patent in suit; as a part of the patent in suit we have Fig. 5. The Fig. 5 has been magnified in size and is before me here. The witness has now testified that Exhibit 7 is a schematic drawing indicating Fig. 5 in its position at the close of the [276] cycle of manufacture in making a block of carbon dioxide, solidified.

Q. Is that not true?

A. That is correct. That is as far as I have answered.

The Court: So far, it seems to me that is material. In other words, this witness has a right to give, by his testimony, his analysis of the various elements that go to make up Fig. 5, but it does not make any difference whether it by a schematic drawing, or what he does it by; it only illustrates his testimony, and it is admissible only for the purpose of illustrating his testimony. They have not yet been offered in evidence, and I shall limit them to that when the time comes, of course. They are not supposed to be exact drawings, or take the place of the patent drawings. I will have to determine that—whether they really represent the operation of this machinery. Here we have an expert explaining this machine. Part of his explanation is this series of schematic drawings.

Q. By Mr. Morris: Will you explain chart II then, and compare it with Fig. 5?

A. Chart II shows the next step in which the closing head has been raised into chamber sealing position. The carbon dioxide inlet remains closed; the lower pressure outlet remains closed, and the high pressure outlet, for unsolidified gas, has been opened.

The Court: You are just getting ready to start the next [277] cycle, aren't you?

A. Yes.

(Testimony of Charles L. Jones)

Q. By Mr. Morris: What is the legend on that? Is that a correct legend?

A. "Start of cycle, closing head in closed position." That is correct.

Q. Will you turn to chart III, Plaintiffs' Exhibit 9, and explain that?

A. Chart III is headed "Position for charging CO₂ into chamber." The valves remain in the same position as just described, the upper, or pressing plunger, however, has been raised to its uppermost position, and an arrow has been inserted along the conduit marked "Outlet for unsolidified gas" to indicate that this is now connected with the compression system, and the chamber will be filled by a back flow from that system with carbon dioxide, under whatever pressure exists in a particular compression system at that point. In ordinary practice that might be 40 to 60 pounds per square inch.

Q. What would be the direction of flow in the high-pressure outlet, on that chart III?

A. As indicated it is back flow from the pressure system into the press.

Q. What would be the back flow of gas, of unsolidified gas, after the valve in the CO₂ inlet has been opened?

A. It would be outward from the press; reversed [278]

Q. In a reverse direction from the arrow?

A. Yes.

Q. Will you turn to No. IV?

A. No. IV is headed "CO₂ being charged into constant volume chamber."

(Testimony of Charles L. Jones).

Q. What is indicated by the arrow at the CO₂ inlet pipe?

A. The carbon dioxide inlet has been opened and liquid carbon dioxide admitted thereby into the chamber. This, again, might be at any convenient pressure and temperature, according to the equipment that you have been using at the particular plant, but is assumed to be liquid carbon dioxide rather than gaseous, and in any case would be made to correspond to the point for that particular plant operator.

The Court: Your drawing III simply is the next stage in the cycle: You pull back in any of the gas in the proceeding operation which had come in and been gasified—CO₂ that has become gasified, and has gone out there, and drains back; you take any of that you want; all that is available, and then throw your main stream in from the CO₂ outlet?

A. That is not clear. No gas is obtained from the line entering this at the arrow. It forms no solid. It contributes nothing to become later formed. However, the reason that practice is often followed, in many cases the carbon dioxide source is from an evaporator or shell, in which the liquid is held under its own vapor pressure, and may be a [279] pressure of 80 to 100 pounds per square inch at that point. It is so close to its own freezing point that if released suddenly into the empty press chamber at atmospheric pressure there is a tendency of the carbon dioxide inlet valve to plug up, due to solidification in the valve. This is avoided by having a counter-pressure already present in the cylinder when the valve is opened.

Mr. Foster: I object to the answer of the witness, and move to strike it, as well as his previous testimony about

(Testimony of Charles L. Jones)

these operations, in this diagram No. 3, Exhibit 7 for identification, on the ground that there is no disclosure of these operations in the patent, and there is no distinction in the question between the commercial operation and the operation taught in the patent; it is some operation performed at some undisclosed time and place.

The Court: I don't feel so, Mr. Foster. It doesn't make any difference whether the man who invented the machine knew that was going to happen, or did not know it was going to happen; if it is possible in actual operation, and does actually happen, he gets the benefit of it, doesn't he? Isn't that the fundamental principle of the patent law? This man builds a machine, and it may be at the time he did not realize this was going to happen, but it didn't take very long to find out how to work that, and if it did not change the machine, and this is not a method patent; it is an apparatus patent,—and on cross-examination you may [280] knock this story into a cocked hat.

Mr. Foster: I have no criticism of your Honor's statement, if this is asked of the prior patents.

The Court: Yes; on cross-examination you may be able to minimize the effect of the testimony. I wanted to be sure it was in the record why that was done; that was the reason I asked the question.

Mr. Foster: I was confused, whether it was intended that this witness testify to what was disclosed in the patent with respect to the operation of the apparatus, Fig. 5, or whether he was testifying as to how it could be operated?

Mr. Morris: And adapted to be operated.

The Court: All I wanted him to testify to was what this Fig. 5 shows, and the adaptation to that particular type of machine. It may be that some of these matters

(Testimony of Charles L. Jones)

require explanation. It did not seem to me it was clear from the explanation of the witness, why this drawing III had been introduced as an intermediate step between 3 and 4.

Q. By Mr. Morris: I think in your previous answer you were referring to a triple point operation, were you not, Dr. Jones? A. I was.

Q. And internal pressure in the chamber for the triple point is approximately what gauge pressure?

A. It may be selected at the convenience of the [281] particular plant operator at any point, as long as it is of the triple point. In common practice it is about 80 pounds.

Q. You mean charging?

A. The filling pressure.

Q. What is the difference between charging liquid into a chamber having a pressure of upwards of 60 or 70 pounds and charging that liquid into the chamber at atmospheric pressure?

A. In the first instance the chamber is filled with a bath of liquid carbon dioxide, having suspended therein particles of frozen impurities. In the second instance, a mass of finely divided carbon dioxide snow is directly deposited in the chamber, with the impurities distributed through there.

Q. In making a charge at upwards of the triple point, which I will assume is 60 pounds, or is it above that, Dr. Jones? [282]

A. It is, I think, exactly 5.113 atmospheres, and 60 pounds guage pressure. That is a very fair statement; very close to that.

(Testimony of Charles L. Jones)

The Court: Where did you get to calling this triple point?

A. That is the technical term, and is the correct term for that, denoting the fact that every chemical substance which does not decompose at its triple point has a temperature which is characteristic to that substance. The reason it is called triple temperature is that it is the only temperature at which it can exist at all three phases together in the same vessel, that is, solid, liquid, and vapor. The triple point of water ice is at 32 degrees Fahrenheit, and I can't from memory state the exact pressure of this; it is about 4 millimeters. It is under a vacuum sufficient so that you may have your water and water vapor in equilibrium in the same vessel, under the same conditions. If the pressure is raised it is condensed; if it is lowered it evaporates.

The Court: CO₂ is minus 70 degrees temperature and 5 atmospheres?

A. Yes, or 60 pounds gauge pressure. The reason is this: The layman does not think of water as having a triple point. The accident, if you please, is that the vapor pressure of water, at the freezing point, is only a few millimeters of mercury. Therefore it is unimportant. [283] If the vapor pressure of water at 32 degrees Fahrenheit were appreciable, say five to seven pounds, we would all be aware there was pressure as well as temperature connected with the idea of the freezing point, and would naturally speak of the triple point of water instead of speaking of freezing point.

(Testimony of Charles L. Jones)

Q. In carrying on a triple point operation, what pressure is maintained in the chamber after the discharge is completed?

A. May I ask whether you are now speaking of Figure 5 or Figure 4?

Q. 3.

A. In Figure 3 there is no liquid in the chamber whatever.

Q. Without reference to any figure, in the triple point operation is the charging liquid vaporized as it passes into the nozzle, or is it the effort of the operator to put it into the chamber in liquid form?

A. It is introduced in liquid form.

Q. Can you carry out the triple operation unless it is so introduced into the chamber? A. No.

Q. How does the operator of this press keep it in liquid form while it is being charged into the press?

A. The press inlet, the carbon dioxide inlet and outlet, must be so proportioned that the chamber pressure automatically reaches a pressure above the triple point.
[284]

Q. And isn't that aided by the open valve in your outlet pipe in No. 3, and your backflow, which is a pressure of approximately what, in No. 3?

A. I answered that question, that the opening of the outlet valve, and the opening of the carbon dioxide inlet, is merely a convenience for the press operator in allowing him to start his operation with less danger of freezing his inlet nozzle.

The Court: Would you read the question?

(Question read by the reporter.)

(Testimony of Charles L. Jones)

The Court: You have approximately atmospheric pressure until you open up that inlet valve, don't you?

A. Correct.

Q. So that answers that part of it. The other part of the question has not been answered yet.

A. Pardon me; I have answered that the valve opening establishes whatever pressure is available in that part of the compression system in the particular plant which ordinarily would be 40 to 60 pounds.

Q. By Mr. Morris: In order to carry out your triple point operation you must have a pressure of 5.113 atmospheres? A. Yes.

Q. You can get part of that in that way, can you not?
The Court: In what way?

Mr. Morris: By the backflow of the 40 to 60 pounds pressure. [285]

A. Yes. It is not essential; it is optional.

Q. Suppose you wanted to begin your charge with the valve in the high pressure line closed, instead of open, how would you build up that pressure?

A. The carbon dioxide coming from the CO₂ inlet, vaporizing in the chamber, would quickly build up the same condition.

Mr. Morris: Has your Honor any questions at that point?

The Court: No, that is very clear.

The Witness: Passing then to No. 5, which is marked "End of charging period."

Q. By Mr. Morris: Yes.

A. At this time the carbon dioxide inlet is closed. The position of the plunger and closing head are unchanged; the high pressure outlet remains open; during this phase the compressor system draws down the pres-

(Testimony of Charles L. Jones)

sure in the press chamber to the triple point and continues drawing gas from it until the liquid in the chamber has been partially evaporated, and it may continue, without changing the valve, until the chamber is drawn down, due to atmospheric pressure. However, it is customary, in order to save power, to obtain a high pressure outlet of some definite pressure well above atmospheric, and pump this line down only to a degree convenient to the operator. [286]

Q. By the Court: You do that by setting your valve on the high-pressure outlet? A. Yes.

Q. Now, if you left that low-pressure outlet open, that would interfere with that operation and you would just waste that, too, wouldn't you? A. That is correct.

Q. Otherwise it would not have any effect?

A. Otherwise it would have no effect at all.

Q. By Mr. Morris: Is the term "boiling off" used in the industry to indicate a certain period of that operation?

A. The common English expressions used in the triple point operation are "the boil off" and "the blow down," signifying the fact that when the inlet valve is closed the pressure reduces rather rapidly until the triple point is reached and then remains stationary until all of the material in the chamber has been solidified. The gauge needle standing stationary at approximately 60 pounds, that is called "the boil off." Then it starts down and goes down very rapidly from that point to whatever lower pressure it may reach, and that is called "the blow down period."

Q. The boil off period, as I understand you, Dr. Jones, is the period during which there is more or less rapid vaporization of the liquid in the chamber?

A. That is correct.

(Testimony of Charles L. Jones)

Passing to No. VI, marked "start of pressing period," [287] the CO₂ inlet remaining closed, in this step the high-pressure outlet has been closed and the low-pressure outlet opened. This operation is schematically shown here as two presumably manually-operated valves. However, in plants operating today this may be accomplished by a remote control, pneumatically-operated valve; it may be accomplished by a pressure-reducing valve mounted on the compressor in such a fashion that when flow stops through the high-pressure outlet the compressor is automatically transferred to the low-pressure outlet; in other instances the low-pressure line is opened to the air or to a convenient part of the process system, where it may be recovered to where it blows away.

Q. I am not sure, Dr. Jones, that the record makes it clear what determines the point at which that high-pressure line is cut off and the low-pressure line, regardless of where it passes, is turned on. Can you help us a little with that? A. Well, I could—

Q. I will be more definite. My understanding is that a high-pressure line is connected with that part of the compressor system that has approximately that pressure; is that approximately right?

A. If by "that pressure" you mean the pressure existing between the first and second stages of the multi-stage compressor ranging from, say, 40 to 60 pounds, that is correct. [288]

Q. Very good. When the pressure in the chamber is less than that what would happen?

A. When the pressure in the chamber—

Q. Is less than that?

A. —is down to that pressure, flow ceases in the high-pressure line and it no longer fulfills any function.

(Testimony of Charles L. Jones)

The Court: When it is below that—below that, it would pull it back if you did not turn the valve off?

A. It can't go below that. That is the limit. That is all there is.

Mr. Morris: That is what I wanted to bring out.

Q. My understanding of it is: Here is a line in the compressor, a line of gas or a pipe of gas in the compressor, just being compressed, Dr. Jones; my understanding is that if that is 40 to 60 pounds, there has been one stage of compression before it reaches that pressure. Now, my understanding likewise is that this blowback line feeds into that 40 to 60 pounds compressor line. Am I right so far?

A. If you mean it is connected with it. You don't mean it feeds into it, I don't think.

Q. Well, connected with it, what is the difference?

A. Well, it is impossible for it to feed anything into a line at higher pressure than its own pressure; and since it is the low-pressure line, nothing ever flows from the low-pressure line to the high-pressure line. However, it is probably— [289]

Q. We are a little bit at cross-purposes still, Dr. Jones.

The Court: I wonder if part of the difficulty is not in the terminology.

Mr. Morris: Perhaps.

The Court: This high-pressure line is a connection between this instrumentality, this Fig. 5, and some compression chamber of some kind, is it not?

A. Correct.

Q. Now, then, when the pressure is higher in the device than it is in the line and the compressor, the flow is toward the compressor? A. That is correct.

(Testimony of Charles L. Jones)

Q. When they are equalized, it is just like a tube full of water and plugged at both ends; then you turn that off?

A. That is correct.

Q. And the flow stops. When you are going to press you have to get rid of any accumulated gases, and you just throw it out the low-pressure line; is that not correct?

A. That is correct.

The Court: Is that what—

Mr. Morris: That is what I had in mind. And I will make this comment at this moment: On Fig. 3, the pressure in Fig. 3 in the tank being lower in the compressing apparatus, enables that flow to come in. That was all I had in mind. [290]

A. All right. Passing, then, to Figure VIII—

Q. You have not touched VII.

A. Figure VII. I beg your pardon. In Figure VII, marked "end of pressing period," the low-pressure outlet is open, the high-pressure outlet is closed, and the upper plunger is brought down, compressing the charge of solid carbon dioxide into a cake. It might be well to show at this point that the height of the cake is commonly determined by timing alone; that is, the carbon dioxide inlet is left open for a definite time period, a minute, a minute and a quarter, or other period, depending on the temperature and the pressure of the carbon dioxide supplied and the size of the opening, which, by trial and error, proves to give the desired weight of solid in the chamber and therefore the desired height of block.

Q. By the Court: Will they be uniform in a series of operations, reasonably uniform?

A. They are surprisingly uniform when the carbon dioxide supplied is itself uniform in temperature and pressure. Variations of as much as an inch or an inch and

(Testimony of Charles L. Jones)

a half in height were commonly experienced in the early days due to the variations in the temperature of the carbon dioxide fed to the machine. It is unusual now, however, to encounter more than, say, one-half inch variation.

Q. By Mr. Morris: Now, will you pass to Figure VIII—or before passing to Figure VIII, I notice in Figure VII, [291] chart VII, that the plunger is not tight-fitting. Is that deliberate or does it have a purpose in function?

A. That is deliberate, and the plungers in various machines which have been constructed under this design have had from one-eighth to as much as three-eighths inch clearance around the upper plunger for the free escape of gases from the block.

Passing to Figure VIII, which is headed "Block of solid being removed," an intermediate stage of the removal of the block is shown.

Q. Are the plungers following the block down?

A. The plunger following the block downwardly, while the closing head is lowered to open position.

Q. I will now get you to turn to Figure 1 of the patent in suit, Dr. Jones. Do you have that large drawing on that?

No; I gave it to your Honor.

The Witness: All right; I have it here.

Mr. Morris: Very well.

Q. I am sorry, Dr. Jones. Mr. Lyon has called my attention to No. IX.

A. All right. Passing to No. IX, showing block of solid completely removed. This shows the closing head in its final position and a block of solid ready to be pushed out of the mouth of the chamber.

(Testimony of Charles L. Jones)

Q. And then, next, that would be chart I of Exhibit 7? A. That is correct. [292]

Q. By the Court: You do not ordinarily, then, have any operation here where the closing head moves up to cause pressure from the bottom?

A. It is not so illustrated. It was considered to be taken for granted.

Mr. Morris: Dr. Jones made these for me.

Q. What are the papers which I now hand you, Dr. Jones?

A. The first sketch, marked A, is headed "A variation in method of operation of apparatus of the patent in suit." This—

Q. Will you explain that?

A. This shows an optional step in completing the pressing of the block, in which the lower closing head is lowered slightly before the start of the pressing operation and, according to the note I am reading: "At end of pressing stroke of plunger raise closing head to closed position, giving to block a bottom squeeze." This step is optional with the operator and is not always practiced in exactly the same way. Some operators will lower the closing head prior to starting the pressing operation; others will fully press the block with the upper plunger with the closing head in position, and then lower the moving parts of the press a desired distance and apply the bottom squeeze to the lower portion of the block that has already been pressed; still others will say that they are following this practice, and occasionally will make several blocks, or [293] possibly two or three hours-production, and omit the step altogether. And unless you have instructed the operator to use it or know that he is going to use it on the next block, you are never quite sure

(Testimony of Charles L. Jones):

whether this step is going to be included in the operation or whether it is going to be omitted. However, I would like to say that it is always my thought and practice to urge the press operator to include the step in practical operations, because it has always been my feeling that the added density imparted to the lower half of the block is well worth while.

Q. The closing head shown in Fig. 5 of the patent in suit—and I will ask you to turn to Fig. 5 of the patent in suit—has or has not a boss on it as shown in this chart A?

A. It has such a boss. I would like to make clear here, however, that the bottom squeeze operation is in no way dependent on that structural feature, as I have operated presses in which no such boss existed and still applied pressure from the closure head by permitting the block to extend out into the room from the end of the chamber by a definite distance, in which it might be thought that the unconfined material exposed would be pressed sideways or would cause a damaged end on the block, and still obtained a satisfactory product in that way.

Q. Will you point out from Fig. 5 to his Honor what that is in Fig. 5 that is marked 110, or as shown in Fig. 7, [294] marked 111?

A. This part shows two dividing walls or septa which may be placed on the bottom platen for subdividing a block into four portions. This feature was discarded very early for the reason that Cole and McLaren, together with myself, soon found that we had an advance over previous practice in the change in dimensions of the molds on these presses; that is, in changing from a 10-inch cube to a block 20 inches on a side, the proportion of

(Testimony of Charles L. Jones)

the mold wall surface and the volume and weight of the piece being pressed is cut exactly in half, and this decrease of 50 percent of mold wall friction results in a more effective pressure throughout the block and a more uniform density. The same thing is observed in ceramic presses, where a shallow, a thin brick can be very much better pressed than a deep brick.

Q. 110, then, is just the movable—

A. A movable element which is an appendix which disappeared early in the history of the machine and has never made reappearance.

Q. Very well. Now, will you look at chart B—

The Court: Before you do that, let us keep this record clear. Let us admit the nine drawings of Exhibit 7 into evidence for the purpose of illustrating the testimony of this witness, and add thereto as part of the same exhibit, A and B, and they will be given the plaintiffs' next number in order, keeping the eleven of them all together.

[295]

The Witness: Pardon me, I have made no discussion of B.

Mr. Morris: That will be Exhibit 7, the seven numerical exhibits and two letter exhibits.

The Court: That is right.

Mr. Morris: Nine numerical exhibits and two letter exhibits.

The Court: Nine and two, making eleven all together.

Q. By Mr. Morris: Chart B of Plaintiffs' Exhibit 7, Dr. Jones.

A. This is also headed "A variation in operation apparatus of the patent in suit." It simply indicates that different methods may be employed in the removal of the block, and at the operator's option the plunger may not

(Testimony of Charles L. Jones):

be used to forcibly eject or push the block out of the chamber, but may be retracted to its uppermost position and after a slight delay, the block will melt from the chamber and fall of its own weight to the lower plate.

Q. If you were going to permit it to fall of its own weight would you permit it to fall that far, or would your closing head be close up to the lower end of the chamber?

A. It should be close to the chamber to avoid the shock of being dropped through 10 or 12 inches; but with the product that is being made today it is not uncommon to find an operator who does exactly that, lowers the lower plate and lets the block fall.

Q. What is the dimension of the block ordinarily made [296] in the apparatus that has been used, apparatus of the Fig. 5 of the patent in suit type—question withdrawn. What is the usual size of the block made in the press of the patent, vertical press of this patent?

A. 20x20x10 inches.

Q. And those blocks weigh approximately what?

A. Oh, 210 to 240 pounds, approximately.

Q. Dr. Jones, I will now ask you to turn to Fig. 1 of the patent in suit, and get you to tell me how that shows a high-pressure and a low-pressure line.

A. The patent in suit shows a line 80—

The Court: I do not understand this very well. I will stand over here and watch you. Suppose you use this (large chart) and I will stand here and watch you.

A. All right; I will try. The patent in suit shows the line 80 which carries the outlet carbon dioxide from the press past a heat exchanger, so indicated that it can be included in the system or excluded from it, and passing into diaphragm valve 84 and exhauster 81. Diaphragm

(Testimony of Charles L. Jones)

84 may be any suitable diaphragm valve of the pressure-reducing or pressure-regulating type which maintains a definite pressure in the line 80. Exhauster 81, as originally conceived, was, I believe, a blower, a rotary blower of a positive type, however, which did not permit the free passage of gases through it; Root's blower, I believe, is the common term applied to it. [297]

The gas then passes through an expansion tank 82 and into an outlet line 83 which communicates with a gas holder. The gas holder on the line is an indication that the pressure at that point would have to be very low, that is, whatever the sealing liquid in the gas holder, water or oil, might permit. Therefore we have a pressure in the line 80, regulated at whatever value is permitted by the diaphragm valve 84, and the exhauster 81.

Q. So that you can get a discharge from your chamber of both high pressure and low pressure through the same lines?

A. That, I should say, the structure shown, is adapted to produce that result.

Q. Dr. Jones, will you be good enough to tell me about the snow operation, whether this apparatus is adapted—

The Court: We had better get this identified in the record.

Q. By Mr. Morris: You were referring to Fig. 1 of the drawings of the patent in suit?

A. That is correct.

Mr. Morris: I will offer this as plaintiffs' exhibit, the enlarged diagram, as Plaintiffs' Exhibit No. 8.

The Court: It will be received as explanatory of this witness' testimony.

Mr. Morris: The question is withdrawn.

(Testimony of Charles L. Jones)

Q. Will you, referring to the apparatus illustrated in Fig. 5 of the patent in suit, tell me whether a snow [298] operation may be carried therein, and at what pressures in the chamber, what the product would be, and what other products may be made in the chamber and apparatus of Fig. 5 of the patent in suit?

A. The patent in suit clearly states that Fig. 5 may be substituted for the snow compressing apparatus, so marked, and appearing in Figure 1 of the patent. It is therefore to be supposed that explanations offered with respect to the function of the pipe 80, the diaphragm valve 84, and exhauster 81 apply with equal force to Figure 5 or to snow compressing apparatus shown in Figure 1.

As has already been stated, the apparatus of Figure 5 is adapted to make any of the different types of solid discussed, that is, snow product, and slush product, or the triple point product.

Q. By the Court: Well, to put it another way, is there anything that you can do with the apparatus indicated in Exhibit 6 you can't do with the apparatus indicated in Exhibit 5?

A. No; there is nothing you can do with the apparatus in Exhibit 6 that cannot be done with Fig. 5 of the patent.

Q. By Mr. Morris: Is the converse true?

A. No; the converse is not true. Even when the product of Figure 6, or Exhibit 6, is attempted to be duplicated in Figure 5, a superior result is obtained because the exposure to the atmosphere has been eliminated, [299] the variable moisture content which is introduced by the humidity of the air with Exhibit 6 is eliminated, and the variations due to the human element in tamping

(Testimony of Charles L. Jones)

are also eliminated. I would not leave the impression, however, that Figure 5 is perfect. It is still necessary to so adjust the inlet and the manipulation of the apparatus as to produce a sound block of product. It is perfectly possible to make inferior products on the advanced machine as well as on the older machine.

Q. Are the forces of nature which are applied in this apparatus operating in the raw, or are they under man's control?

Mr. Foster: That is objected to as vague and indefinite and immaterial.

The Court: Well, I think I know what Mr. Morris is getting at. I don't think he has expressed it very well, possibly, for the record.

Mr. Morris: I am again trying to avoid leading questions.

The Court: Go ahead with your leading questions.

Mr. Morris: I am accustomed to the other method. I will get it more directly. That question is withdrawn.

Q. How are the forces released in this apparatus and controlled, and is it necessary to control them to obtain a desired result?

A. Definitely, yes. The pressure existing in the chamber, as has already been stated, is controlled by valves [300] in the outlet and controlled by the design features of the balance of the plant system, elements corresponding to the exhaustor 81 and the diaphragm valve 84 in Figure 1. The rate of input is controlled by means of a valve which is indicated, the temperature of the input is controlled by the operation of one or more heat exchangers, the evaporator coolers, which are indicated diagrammatically or schemetically in the drawing—

(Testimony of Charles L. Jones)

Q. Is tamping—

The Witness: Pardon me, I had not finished.

Mr. Morris: I am sorry.

A. The application of hydraulic pressure is controlled by means well known in the art and not, I think, claimed particularly by the present patentees. The sequence, the cycle of operation, is under definite control of the operator, and we have just described various variations of the normal method of operating that.

Q. Is tamping eliminated by the apparatus of Fig. 5 of the patent in suit? A. It is.

Q. Is the handling of the uncompressed, unpressed product with that apparatus in the atmosphere made unnecessary? A. It is.

Q. Are the losses incident to such tamping and putting into an open mold and pressing, as you describe it, in connection with the snow tank—are they eliminated by this [301] apparatus of Fig. 5 of the patent in suit?

A. I would say that they are eliminated by the use of that apparatus, with the qualification that a part, but not all of them, are eliminated. If the scheme marked "a variation" involving the lowering of the closing head in order to give the bottom squeeze, or the opening of the low-pressure outlet for unsolidified gas to the atmosphere, in case it happens to be convenient in the particular instance to do those things, then only a part of the losses are eliminated.

Q. What definite pressures may be used in the apparatus of Fig. 5?

A. Well, I don't know of any limitation except strength of the machine. They have used in that apparatus in order to prevent too violent boiling, in some of the first trials where the liquid supplied was only avail-

(Testimony of Charles L. Jones),

after it once attains it during the triple point boil-off period?

A. Yes; it does. That pressure is not an absolute constant for all different plants, because it varies with the impurities that are present; that is, if a considerable amount of air is being pumped through the system from the source of the carbon dioxide, or if there might be, as there sometimes are, hydrocarbons, ethane, ethylene, acetylene, and other materials associated with that carbon dioxide, they will vary the triple point in the same way that dissolving salt in water will vary the melting point of water. Those variations are minor, however, and in general it remains constant.

Q. And automatically so? A. Automatically so.

Q. After the pipes have been once adjusted?

A. Yes.

Q. Why is that true, Dr. Jones?

A. Well, that is a factor of nature, no other explanation.

Q. If it boils more rapidly, does the pressure build up?

A. No; the boiling rate is entirely independent, regardless of whether it boils off rapidly or slowly, or whether filled with slush, filled with liquid, and then boiled down; the boil-off pressure is the triple point pressure.

Mr. Morris: Very well. Does your Honor find this a convenient time for your afternoon recess?

The Court: Yes; we will take it now.

(Short recess.) [305]

Q. The operations described by you of the apparatus marked 5 of the patent or the operations that you have seen personally from time to time, or not? A. Yes.

Mr. Miketta: I object to that, your Honor, as being ambiguous.

(Testimony of Charles L. Jones)

The Court: Objection sustained. I don't know what the question means. Read it, please.

(Question read by the reporter as follows: The operations described by you of the apparatus marked 5 of the patent or the operations that you have seen personally from time to time, or not?)

Mr. Morris: That should be "are."

The Court: I thought it was "or" instead of "are." You understood it to be "are"?

A. Yes. I understood it to be a-r-e.

Q. By Mr. Morris: You reminded me, Dr. Jones, at the recess that you did not complete your employment at the beginning of your testimony. Where did you leave off, do you remember?

A. I failed to state at the present time I am under a retainer from International Carbonic.

Q. One of the plaintiffs in this case?

A. I believe so, yes.

Q. In what capacity are you under a retainer from International Carbonic? [306]

A. I was employed by them as a consultant.

Q. You had been so employed since when?

A. About 1938; nearly six years.

Q. What is your further occupation, Dr. Jones, at the present time?

A. I believe that has already been stated; with the Sterling Steel Corporation.

Q. I had understood you had not stated.

A. I believe that is in the record.

Mr. Morris: That is all.

(Testimony of Charles L. Jones)

Cross-Examination

Q. By Mr. Foster: In order to fix the dates in my mind, Dr. Jones, you received your doctor's degree, as I understood it—was it in 1923? A. That is correct.

Q. What was the nature of your treatise, your doctor's treatise?

A. My doctor's treatise was submitted of some work done for the Gulf Refining Company, and was on the subject of oils from oil shales and low grade bituminous coals.

Q. You mentioned last your employment by one of the plaintiffs. While you were employed by the Dry Ice Corporation of America did you participate in the preparation for trial or in the trial of the case of American Patents Development Corporation v. Carbides?

A. I did. [307]

Q. Were you the patent expert for the plaintiff in that case?

A. I gave testimony for them; I suppose I was a patent expert, yes.

Q. That was for the plaintiff?

A. You are really taxing my memory now. I don't know which one of the plaintiff—yes, it was the plaintiff; correct.

Q. At the time the plaintiff was the Dry Ice Corporation of America? A. Yes.

Q. That was the time you acted for the plaintiff as a patent expert? A. That is correct.

Q. As I understand it, later there was substituted in the case the American Patents Development Corporation as the plaintiff?

A. I don't remember the proper date.

Mr. L. S. Lyon: I object to that.

(Testimony of Charles L. Jones)

The Court: Sustained.

Q. By Mr. Foster: You have acted as a patent expert in a number of infringement cases, haven't you, Doctor?

A. No, I wouldn't say that. I, in fact, only recall one other instance in which I have been an expert in a patent infringement suit.

Q. I wish to inquire about the state of your knowledge [308] prior to May, 1928, in the field relating to carbon dioxide. You had learned something about that material, I presume, during your college days?

A. That is correct.

Q. You referred, in your direct examination, to the book of which you were co-author, entitled "Carbon Dioxide." I note that on page 196 of that work there appears, a little above the middle of the page, the statement: "The starting point in the development of solid carbon dioxide manufacture is the simple cycle used for many years in the preparation of solid carbon dioxide for the laboratory. Liquid carbon dioxide, made by any of the methods already described, is expanded into a bag made of cloth or chamois leather and heat of vaporization, taken largely from the liquid converts part of it into 'snow.' The yield of 'snow' obtained by this method naturally depends upon the initial temperature of the liquid and the efficiency of the heat transfer during the reaction." Had you seen carbon dioxide snow formed in the manner described in that portion of your book, prior to May, 1928?

A. Yes, it was familiar to every college student and probably to most high school students.

Q. Isn't it true that it was also common to your knowledge in the laboratory prior to May, 1928, to form

(Testimony of Charles L. Jones)

carbon dioxide snow with a mechanical device which was releasably connected to a cylinder of liquid carbon dioxide? [309]

A. Yes. I don't know whether you want me to expand the answer.

Q. You may continue.

A. My interest in solid carbon dioxide was first aroused after leaving school, by being assigned to do some work on a hand fire extinguisher for the Bell Telephone Company of Pennsylvania. It was quite a problem then, and that involved developing a discharge device, a horn, a nozzle, and a valve mechanism, which has since that time become standard fire extinguisher equipment in telephone exchanges. The characteristic of that, however, is that it does manufacture snow in copious quantities, and uses that as a means of extinguishing fires.

Q. When did you see that, Doctor? A. 1922.

Q. It was used in that year, was it, for that purpose? A. Oh, yes.

Q. Prior to May, 1928, you understood what you have explained as the triple point of carbon dioxide, didn't you? A. Oh, yes.

Q. That is, the temperature and pressure conditions of the triple point were generally known?

A. That is correct; known for many years.

Q. You had yourself, prior to 1928, evaporated liquid carbon dioxide, and caused a portion of it to be converted into a gas and a portion of it into a solid? [310]

A. That is correct.

(Testimony of Charles L. Jones)

Q. Prior to that time it was commonly known that variations in pressure conditions caused variations in properties of solid carbon dioxide, isn't that true?

A. No, I wouldn't say so. I don't think I knew myself what the differences between so-called slush and snow and solid products were until I actually made such products, and I did not actually make anything of the kind until the fall of 1928, and even then I would say that even after the introduction of the device we are discussing here, there was a period of not a short time, but several years, when we were still learning there was a great deal yet to be known about the properties of solids. I doubt if it is all known yet. For example, this year I understand there is going into operation a small plant in Mexico which takes its source of carbon dioxide from a natural well containing some 6 or 8 per cent of hydrocarbons in the raw material. I think possibly there will be a great deal of technical work to do until they will be at all sure they are going to make the same grade of solid and the same grade of commercial properties from it that are desired.

Q. Had you, prior to May, 1926, seen any device for compressing carbon dioxide snow?

A. Prior to what date?

Q. May, 1926.

A. May, 1926? I will answer that by saying only [311]laboratory devices or small devices intended for making pellets of the material.

Q. I will direct your attention to the patent of which plaintiffs' counsel has a copy—and may I hand it to the witness?

The Court: Yes.

(Testimony of Charles L. Jones)

Mr. Foster: For the purpose of facilitating this examination, and I will ask you if it is devices such as disclosed in patents 955,454 and 1,018,568, that you referred to in your last answer?

Mr. L. S. Lyon: I object to that as not cross examination, your Honor. I don't think it is part of the plaintiffs' case, and an examination of the plaintiffs' expert, who has not been interrogated about these prior patents, is improper cross examination.

The Court: He is not interrogating him about the patents. He is simply asking him if the devices he had seen were similar to those. It is for an entirely different purpose. Objection overruled.

A. May I have the question again? Did you ask me, were they the same, or did you ask me were they similar?

The Court: Read the question.

(Question read by the reporter.)

A. It was devices similar, in a general way, to those, but not identical with the patent drawing.

Q. By Mr. Foster: Did those devices, to which you [312] referred, Doctor, as having seen prior to May, 1926, for compressing carbon dioxide, include a chamber in which the snow was formed and subsequently compressed into a product?

Mr. L. S. Lyon: I object to this line, your Honor, as attempting to go into the prior art.

The Court: He is testing his knowledge of these things. He is asking him only a question as to his experience. He is not talking about the prior art in this question. The objective is simply testing the knowledge

(Testimony of Charles L. Jones),

of the witness and the accuracy of his testimony on direct. Objection overruled.

A. My answer is no; the only device that I had seen prior to that time was a device of that class known as the Goosman snow pencil forming device. It had a perforated receptacle at the outlet of the cylinder, and I believe at one time it was supposed to have been adapted for compressing, but it was not so used. We had one of those in the laboratory, and formed a pencil of carbon dioxide snow merely by filling this perforated container, in the same way as a canvas bag would be, forming a cylinder of liquid CO₂.

Q. Did this device you have referred to as the Goosman device have means for compressing carbon dioxide snow? A. Not the device we used, no.

Q. Had you seen such a device prior to May, 1926, [313] having means for compressing snow?

A. That is quite a memory test. I don't believe so. We never had a compressing device in the one we used. We merely filled the compression chamber, and the cylinder took care of compressing it. It was, however, compressed, and the carbon dioxide in the cylinder produced a fairly compact pencil of fairly good mechanical properties; good enough that it was used for many years in the medical arts without any question of requiring any further compression.

Q. Prior to May, 1926, you had, in the course of your studies at the university, and your subsequent activities in the industry, studied the literature in this carbon dioxide field, hadn't you, Doctor?

A. That is correct.

(Testimony of Charles L. Jones)

Q. And are you able to state, as a result of such study, that you knew, prior to May, 1926, that the literature disclosed devices which include a chamber in which carbon dioxide is formed by the evaporation of the liquid, and in which it is compressed?

A. Yes, I think there were varying disclosures.

Mr. L. S. Lyon: I object to the witness being asked what was disclosed in the literature, as not a proper method of proof.

The Court: Objection sustained. You may ask him what he knew, but whether it was disclosed in the literature is not proper on cross examination. [314]

Q. Did you, prior to May, 1926, Doctor, have knowledge, know of, a device in which carbon dioxide snow was formed by the evaporation or expansion of the liquid carbon dioxide, and in which the snow was compressed?

A. In the same chamber?

Q. Yes.

Q. I had never, to my knowledge, seen such a device. I did not know of any machine or such a suggestion which could escape being called a casual or purely laboratory use of it, unless it might be the suggestion that I myself made to the carbon dioxide manufacturers, in 1924, and I do not believe that I had gone so far as to include that step at that time.

Q. You do recall that the idea had occurred to you, in 1924 or earlier than 1924, of such an operation and device, is that correct?

A. I am very much afraid you are trying to put something into my memory that does not seem to be there. I made the suggestion that carbon dioxide might be solidified and sold by my employers, frankly, only after the idea had already been reported to me as having been, if

(Testimony of Charles L. Jones).

not accomplished, at least proposed by the Pressed Air Corporation in New York City. In other words, they, and not I, were the originators of the idea that solid carbon dioxide, instead of being merely a laboratory curiosity, might become an article of commerce. I was told that they did compress [315] the blocks. I was shown photographs which showed some of the blocks. Whether they were compressed in one chamber or in a dozen, or whether they were made by hand or machine, I had no knowledge at the time, and no connection with the industry until some years later. They may have been. I don't know.

Q. Let us fix the time when you learned of this contention or suggestion that solid carbon dioxide should be compressed in blocks and sold as an article of commerce. When was that?

A. I would say that was in 1924, in the summer of 1924. I could not give you an exact date. I don't believe I know.

Q. When did you first see a press which was adapted for compressing solid carbon dioxide? [316]

A. In the Maspeth plant of the Liquid Carbonic Corporation, in Long Island, in 1927. That was in yesterday's testimony.

Q. Can you fix the time in 1927?

A. I am afraid I can't exactly. I believe it was in the fall.

Q. And that press was in operation?

A. That press was in operation.

(Testimony of Charles L. Jones)

Q. You, in your direct examination, referred to the ceramic industry, and presses employed by that industry. Do you have a knowledge of such presses?

A. Oh, yes. Between the time of the completion of the liquid carbon dioxide investigation, at the Mellon Institute, and the employment with the Dry Ice Corporation of America, in 1927, I was engaged in the ceramic industry, and was very much occupied with such presses.

Q. I direct your attention to this set of three diagrammatic drawings, which is marked Defendants' Exhibit A for identification. You had observed in the ceramic industry at that time, had you not, a press such as is illustrated in the view A?

Mr. L. S. Lyon: I object to that upon the ground that it is not cross examination, and is not material to any of the direct examination, whether the witness ever saw such a press in the ceramic industry, or not.

The Court: Of course, it is pretty hard to tell whether [317] the cross examination is designed to test the knowledge of the witness. So far as proof of the truth of the statements is concerned, in order to prove the defendants' case, it isn't of much value, but I think for the purpose of testing the knowledge of the witness—he has gone into it pretty fully—the question is sound. With that limitation you may answer.

A. I will answer that in this way—

Mr. L. S. Lyon: I would like to suggest to the court that his knowledge of the ceramic industry is not material at this stage. It was not gone into on direct examination. If he did or did not know anything about the ceramic industry would not make any difference.

The Court: It is like the grinding of corn in a coffee mill. It is not the corn or coffee that amounts to any—

(Testimony of Charles L. Jones)

thing; it is the mill. It is not the ceramic or carbon dioxide that amounts to anything; it is the press he is inquiring about. If he limits it to presses, regardless of what they are used for, I think it is proper to test his knowledge. I don't know about the form of the question. I think the subject matter can be reached.

A. I would like to answer this way: I had seen a variety of presses employed for a variety of ceramic products, and at the time was impressed with the lack of success in attempting to make any ceramic product unless it was so filled into a mold, so formed, so pressed, so handled in a [318] press adapted to the material being handled, and so processed in all its subsequent stages, that the finished product was handled in the manner adapted to processing raw material. For example, in the manufacturing of a silica brick it was necessary to tamp the brick mixed into the mold, a limitation which the brick industry is still struggling to avoid, and still without success. It is necessary to tamp every silica brick mold before the pressing operation takes place. My answer is yes, I have seen presses.

Mr. Foster: That was not exactly the question. In your varied experience, Doctor, you did see presses such as that diagrammatically illustrated in this diagram A of Defendants' Exhibit A for identification, that is true, isn't it?

A. No, not exactly. That bears a superficial resemblance to the silica brick press, with the exception that the lower construction of the closed chamber would never be acceptable. There would be no bottom in such mold; because the ceramic material would quickly clog it and destroy it. It would be a four-sided mold, with a bottom

(Testimony of Charles L. Jones)

plate, being easily withdrawn therefrom, so it would be self-cleaning.

Q. With that qualification your answer is yes?

A. It is that it bears a superficial resemblance to that diagram.

Mr. L. S. Lyon: I object, when the witness answers no, [319] to saying: With that qualification your answer is yes.

The Court: He has straightened that out.

Q. By Mr. Foster: When did you first see a press which included a chamber with a movable or removable lid or head and a plunger capable of compressing material in that chamber against that lid or head, Doctor?

A. Am I to suppose that that refers to a gas-tight chamber in which the operations are performed, that involves the materials under pressure, or am I to take it counsel means any—

The Court: You are not to suppose anything. Just read the question.

A. Read it again, please.

(Question read by the reporter.)

A. It is difficult to say. Certainly before 1920.

Q. By Mr. Foster: When did you first see such a device, which was capable of operating with the contents of the chamber under pressure?

A. I am not allowed to object to a question, am I?

The Court: No. I assume what he means is that the chamber was sufficiently sealed so there was pressure in the chamber above atmospheric pressure.

A. Does he mean gas pressure? When you say a thing is a press, is presupposes pressure is to be used in it; otherwise it is not a press at all. So I would say all the presses I have ever seen exerted pressure. [320]

(Testimony of Charles L. Jones)

Q. By Mr. Foster: And such presses, in which the contents of the press were in fluid form,—when did you first see such presses as that? A. Fluid?

Q. Yes.

A. That is still a different art. I think probably Bakelite presses. I find some difficulty in saying when I first did see a Bakelite press, pressing plastic parts. I should say prior to 1920.

Q. In these presses that you have been referring to in your answer to the last questions, and which you saw prior to 1920, I understand that in some of them that Bakelite or similar plastic materials were compressed, that is correct, isn't it? A. That is correct.

Q. What other materials were compressed in those presses to which you are referring in this last answer?

A. Ceramic tile presses, brick presses, plastic material presses, cottonseed presses, I know of no contention or no mystery connected with the idea. There are lots of presses. Really, I would have great difficulty in cataloguing just when and where, in the course of my life, I ever happened to see a press. It is a frequent occurrence.

Mr. L. S. Lyon: I submit that so far as exhibiting whether or not the witness had any knowledge of presses is concerned, prior to 1926 and 1927, whenever the date is, that [321] the examination has gone far enough. I remind the court again that this is not proper cross examination, or the place or time to develop anything except the knowledge of the witness. I think there should be some limit put on that, if he still has any doubt as to whether this witness knew of any presses or not. I think the examination has gone far enough to show he

(Testimony of Charles L. Jones)

knew enough about presses to be able to testify to what he did.

The Court: As I indicated, the only thing I think you may properly be permitted to do is to lay the background. Of course, you can't prove your case affirmatively by cross examining the other fellow's witnesses. Ordinarily if you are going back into the prior art, if you are just laying the foundation as to what this man had by way of background, a certain amount of it is proper, but I agree with counsel; I think you have got the background now, and you ought to get right into the subject of the direct examination.

Mr. Foster: Very well, your Honor.

Q. You referred in your direct examination further to your work on carbon dioxide with the Mellon Institute for the Compressed Gas Manufacturers Association. What was the nature of your work there? What did you do?

A. I did laboratory work; maintained contacts; carried on correspondence with other industries, at points where we hoped we might be able to find new uses or new outlets for liquid CO₂. The first approximately three months of that [322] period I spent attempting to put out a coal mine fire with liquid carbon dioxide, with success which is a moot question. The coal mine was still on fire when we quit. [323]

Q. Wasn't the object of your work to find new uses to be made of products to be made from liquid carbon dioxide?

A. That is correct.

(Testimony of Charles L. Jones)

Q. Your employers, the association which was your employer, constituted a substantial number of manufacturers, did it?

A. I believe at that time there were 49 different manufacturers in the United States, and 18 of them I think contributed to that research fund, and the 18 seemed to have 18 different opinions about everything they wanted to do, so after two years they agreed to disagree, and discontinued their program.

Q. Those years you were at the Institute were 1922 and 1923?

A. That is correct, and a portion of '24. Two years only.

Q. What was being done by the industry with liquid carbon dioxide being manufactured at that time? Was any of it being used as a refrigerant?

A. Very little; I should say about 5 per cent of the output in the industry was sold for recharging commercial carbon dioxide refrigerating apparatus of the ordinary commercial type. It was mainly air-cooling, and building-cooling.

Q. What was it being used for in the main?

A. Something over 75 per cent of the output was used [324] in carbonated beverages.

Q. What new uses did you recommend for carbon dioxide as a result of your investigation? Did you include a recommendation with respect to its use as a refrigerant?

A. Yes, I did.

(Testimony of Charles L. Jones)

Q. And in solid form? A. Yes.

Q. Did your suggestion include the suggestion that this solid carbon dioxide be compressed?

A. Strangely enough it did not. It should have included such a suggestion. It is only logical that having already seen pictures of a compressed product, already sold by someone else, that the idea must have been somewhere in the picture, but I was primarily concerned with trying to arouse some interest among these people who were in the industry, in the possibility of doing anything at all about it. I never ever had in the slightest degree suggested it. I never got that far.

Q. As a matter of fact, Doctor, probably the reason you did not suggest the impression was that prior to those years, 1922 and 1923, you had observed the formation of carbon dioxide snow under such conditions of pressure and temperature that it was a rather coherent mass.

A. No, I would rather state that at that time it did not seem to me to be a problem at all. It seemed to me, as it would to any layman, that that was just a mere [325] matter of detail: that you could take that material, like so much sand, or so much brick stock, or anything else, and just to sit in a mold, and press it in any kind of press. It did not seem to be worth discussing as a problem. It was not until I entered the industry that I discovered some of the difficulties in handling the ma-

(Testimony of Charles L. Jones)

terial. I was awaked to the fact that a business which was superficially very simple, sometimes presents complications.

Q. Was it your prior knowledge of these presses used in molding ceramic brick, and so forth, which caused you to feel the problem or means of pressing solid carbon dioxide into bricks or blocks was so simple that it didn't need to be mentioned?

A. I don't know. I think I would rather say it was not knowledge at all; that it was ignorance which caused me, to think that.

Q. Would you say your conviction was based upon your knowledge of these prior presses to which you have referred, Doctor?

A. That is an analytical question. I really don't know. It didn't impress me at the time as a problem; it never seemed that it would be a problem until I attempted to do it. Then I discovered it was a problem.

Q. In 1923 you left the Mellon Institute, did you?

A. 1924.

Q. It was not until 1927 that you went to the Dry Ice [326] Corporation of America?

A. That is correct.

Q. In the intervening three years were you concerned with any problems relating to the production of solid carbon dioxide or its compression?

A. Not in any way.

(Adjournment was taken until Tuesday, May 9, 1944, at 10 o'clock a. m.) [327]

Los Angeles, California, Tuesday, May 9, 1944;
10:00 A. M.

(Parties present as last noted.)

The Court: You may proceed.

CHARLES L. JONES,

recalled.

Cross-Examination

resumed.

Q. By Mr. Foster: Dr. Jones, as I understand the facts, carbon dioxide can be liquid at room temperature of about 20 degrees Centigrade or 68 degrees Fahrenheit if it is subjected to sufficient pressure; do you agree?

A. That is correct.

Q. And that pressure is in the neighborhood of 817 pounds to the square inch; would you agree with that?

A. I would.

Q. Normally gaseous substances, for example, hydrogen has a critical temperature below 100 degrees Centigrade, doesn't it?

A. Below 100 degrees Centigrade plus or minus?

Q. That is minus.

A. Minus 100 degrees Centigrade?

Q. Yes. A. Yes; it does.

Q. And hydrogen, therefore, cannot exist as a liquid at room temperature, irrespective of the pressure to which it is subjected; do you agree with that? [328]

A. Surely.

Q. And the same thing is true of oxygen?

A. Correct.

Q. And nitrogen? A. That is right.

Q. And helium? A. That is right.

Q. And methane? A. Correct.

(Testimony of Charles L. Jones)

Q. Do you agree, then, with the statement that carbon dioxide has physical properties distinguishing it from other common normally gaseous substances?

A. I can only answer that in one way, knowing what the purpose of the question is; and that would be to say that there is a very large number of materials which are not pure compounds but mixtures of carbon dioxide with other substances. For example, at one time we mixed ethylene oxide, which is a fumigant, with carbon dioxide. They are both vapors, both chemical substances. They are, in a sense, a liquefied gas, although it is not a pure compound or a common substance. That mixes and readily forms a block which is essentially carbon dioxide with another material mixed with it and which is quite suitable for fumigation purposes.

We also made experimentally mixtures with—

The Court: Wait. Let us stop there. When you mixed the carbon dioxide with the ethylene oxide the reason that it [329] responded was because of the characteristics of the carbon dioxide, was it not?

A. That is correct.

The Court: All right; go ahead.

Mr. Foster: My question, Doctor, is directed to normally gaseous substances. Let me ask you another question.

The Witness: A common—

The Court: I think he has not answered. I interrupted him.

Mr. Foster: I beg pardon.

A. Of the common gases only nitrous oxide behaves in a manner similar to carbon dioxide. There are, however, many other materials which are gases and which,

(Testimony of Charles L. Jones)

in admixtures with carbon dioxide, will form a block in the apparatus in question. So it seems to me that you are up against the necessity of defining whether compressed or liquefied gas limits you to say that that class can only include commonly known simple gases, or whether that includes any material which has those characteristics that can be solidified in the press. I don't know the answer.

The Court: Let me ask one more question: Doesn't the result, so far as nitrous oxide or carbon dioxide are concerned, in combination with these others, depend largely upon the percentage of the injection of the foreign gas? If you increase it above a certain point, you can't accomplish the results, can you? [330]

A. That is pretty complex. For example, one of the proposals that was made along that line was the use made by the manufacturer of chlorpicrin. Chlorpicrin is not a gas at all at normal temperatures; it is a liquid, with a very high vapor pressure and a strongly irritant effect, and poisonous properties. We find a quite wide range of percentage of carbon dioxide. We get a block that is a solid block, and it is cold. The chlorpicrin did not contribute at all to any refrigerating qualities of the block, but that was not the object. The carbon dioxide merely kept the temperature down so as to keep the vapor pressure down, and we found that the material could be handled with rubber gloves in an open room by a man without a gas mask, which is of some advantage in handling materials of that kind, which are used for soil fumigation. The project was abandoned and never used commercially, largely because of the fear that in handling and transportation, if some of that material were left neglected, or failed of delivery at a specified time, and stood around

(Testimony of Charles L. Jones)

until the temperature raised, and the carbon dioxide was dissipated, you then would have a highly poisonous material with no protection at all for the people who were handling it. However, I feel that carbon dioxide, where it does contribute to the functioning of forming a solid block, is capable of admixture with a very numerous class of substances to form compounds of possible usefulness. [331]

The Court: You haven't answered my question; you have answered all around it. In every one of those cases, if you increase the percentage of the foreign product beyond a certain mark the effect of the carbon dioxide is taken away? It is the carbon dioxide that gives that effect?

A. That is correct.

Q. The same would be true of nitrous oxide?

A. That is correct.

Q. By Mr. Foster: I understand, when we speak of reducing the pressure upon a liquid gas by adiabatic conditions it is meant we reduce the pressure without the addition or subtraction of heat from the system, is that correct?

The Court: What do you mean by adiabatic?

Mr. L. S. Lyon: I think for the purpose of the record I should object to the form of the question. It is a common discrepancy upon cross-examination, but what counsel is asking the witness to do to answer as to counsel's understanding. It does not ask him as to the fact. He wants the witness to testify whether he understands something or not.

The Court: It may be that the form is not proper. Explain to me first the meaning of the word adiabatic.

A. Adiabatic means expansion following reduction in pressure without addition or subtraction of heat, due to the material.

(Testimony of Charles L. Jones)

The Court: Ask him the question.

Q. By Mr. Foster: What is the meaning of the term "adiabatic [332] condition" as applied to the release of pressure upon a liquefied gas, Doctor?

A. It means expansion accomplished without change. I am going to make a suggestion in order to simplify the terminology. The common expansion of carbon dioxide in this process is a constant total heat expansion, which means, so far as possible there is no change in the total heat of the system; nothing added to it, or taken away.

Q. By Mr. Foster: If we, under conditions of constant total heat, reduce the pressure upon the liquid carbon dioxide to the pressure of one atmosphere, or about 15 pounds per square inch, then this liquid carbon dioxide is converted into solid, and part to gas?

A. That is correct.

Q. Is that true of any other normal gaseous substance, to your knowledge?

A. Yes, indeed, that is true of all other normal gaseous substances, depending only upon the pressure. It so happens that atmospheric pressure is 14.7 pounds, but in the case of water ice a method of making water ice is used in exploration in the tropics, where it is not easily obtained, by taking along a little machine which consists of a vacuum pump, and a Mason jar, and you put a half a teacupful of water into the Mason jar, and turn the crank, and the turning of the crank at the same time agitates the water in the jar, and in two or three minutes you have ice, exactly the same phenomena of [333] constant total heat expansion of liquid water in the water vapor; a portion is converted into solid and the balance to gas, and the explorer takes the ice and uses that for whatever explorers usually use ice for.

(Testimony of Charles L. Jones)

Q. That is done with a pressure upon this water vapor of 14.7 pounds per square inch? Do you wish the court to believe that?

A. No, indeed; it is the pressure obtained in the art; it is the definite pressure; not atmospheric pressure.

Q. I wish you would attempt to confine your answer to my question, and we will get along better. You have told the court that if under conditions of constant total heat the pressure is relieved upon the liquid carbon dioxide, and the pressure is reduced to atmospheric pressure, a portion of it is converted to solid and a portion to gas. Do you know of any other normally gaseous substances, in which that constant total heat expansion would produce that result?

A. At that pressure, no.

Q. In all of the apparatus which you have referred to on your direct examination for making a solid CO₂, there was, if I recall your testimony correctly, an inlet for liquid CO₂?

A. That is correct.

Q. Have you ever seen a practical apparatus for making solid CO₂ which did not have such an inlet? Would it, in your opinion, be possible to have a practical apparatus for making solid CO₂ without such an inlet? [334]

A. Yes.

Q. Would you describe how that apparatus would be constructed and operated?

A. Of course, I would be quibbling, frankly, with terms. There is, however, I think one patent in the art that shows a single pipe connected to the solidification chamber, and it uses that pipe for both purposes, using it as an inlet on part of the cycle, and then, without altering the pipe in any way, a valve is closed in the by-pass of the compressor, and gas is withdrawn through the same pipe,

(Testimony of Charles L. Jones)

which is the inlet. However, there must always be some way of getting the liquid gas into the chamber.

Q. In order to have a practical device? A. Yes.

Q. Do you recalle the name of the patentee to which you refer? A. Yes, the Slate patent.

Q. You consider the construction you describe, as disclosed in the Slate patent, a practical device, I take it, from your answer?

Mr. L. S. Lyon: I don't think there should be any cross-examination as to the Slate patent.

The Court: No; I don't think it makes very much difference. He says it is theoretically possible, in any event, in the laboratory, and experimentally. A rose by any other name is just as sweet, and an inlet is an inlet, [335] regardless. A. Yes.

Q. By Mr. Foster: In all of the apparatus for making solid CO₂, to which you have referred on your direct examination there is, if I recall your testimony correctly, an outlet for the CO₂ gas, is that correct?

A. That is true, an outlet, in the broad sense of some way for the gas to escape, yes.

Q. Have you ever seen a device that successfully makes solid CO₂, without such CO₂ gas outlet?

A. The familiar canvas bag, which was demonstrated in this courtroom last Wednesday, I believe will illustrate the difficulty I have in answering that question. There was an escape for the carbon dioxide gas, but I don't know just how that would be defined as an outlet, in a case of that kind. There must be a means for the escape of the carbon dioxide.

(Testimony of Charles L. Jones)

Q. In order to have a practical device for the making of solid CO_2 , is that correct?

A. That is correct. I would like to add that there is in the patent art a number of devices based on the freezing of liquid carbon dioxide, the same as with water freezing. It is possible to make solid carbon dioxide by taking a glass tube and immersing it in air, and there you have the formation of a solid without either an inlet or an outlet. I don't think I would be quite bold enough to state that either one of those processes is commercially practical.
[336]

Q. In respect to all apparatuses in which solid CO_2 is made by reducing the pressure upon the liquid, where part is converted into a solid and part gas, it is necessary, in order to have a practical device, that we have means for withdrawing or permitting the escape of the gaseous CO_2 , is that correct?

A. That is correct.

The Court: Now, let me see. We take even this tube in which you accomplish your purpose, one of two things has to happen, has it not: Either you would ordinarily say the surplus product continues in the container until it is opened, or it would be incorporated in the product in one form or another, or some of one and some of the other?

A. No, sir. The liquid would be frozen in the same manner that water is frozen in the water-ice tank, and what is called the unsolidified portion of the gas in the patent in suit would be frozen with the balance of the gas, so that all of the carbon dioxide in the tube could be frozen to a solid.

(Testimony of Charles L. Jones)

Q. That is one of the two things. In your opinion, it is incorporated within the product?

A. In solid form.

Q. In solid form. And there would be no surplus in the gas which would escape when you opened the tube?

A. That is correct.

Mr. Foster: One question to be sure that I understand [337] this reference to the prior art disclosures to which you have referred as making a solid CO₂ as water-ice is made.

Q. In that process there is no expansion of the liquid. Co₂ into a gas? A. There is not.

Q. It is merely a matter of subjecting a liquid CO₂ to sufficient pressure and a sufficiently low temperature to cause it to solidify? A. That is correct.

The Court: Well, that is what I was getting at, better expressed.

Mr. Foster: I am sure the court understood it but I was not sure that I did.

The Court: I did not state it very well.

Q. By Mr. Foster: You have referred in your direct examination to the operation of the snow chamber prior to Cole and McLaren, and, as I understood it, there was near the snow chamber a press for the snow; there was near the snow chamber a press for the snow?

The Witness: I don't understand the question at all. Will you read it back, please?

(Question read by the reporter.)

Mr. Foster: Isn't the question clear, Doctor? I don't mean to confuse you.

The Witness: No.

Mr. Foster: If it is not clear— [338]

(Testimony of Charles L. Jones)

The Witness: You are speaking of a description of the snow tank method?

Q. Yes; that is right. A. The answer is "Yes".

Q. If my question is not clear, do not hesitate to say so, Doctor. I do not mean to confuse you. I may, through my lack of knowledge of the terms in this art, unintentionally do so.

The Witness: All right.

Q. In the operation of that apparatus which you observed, the operation of the snow chamber, or snow tank, you called it, didn't you? A. Yes.

Q. —that operation of the snow tank was not affected in any way by the proximity of the press, was it?

A. No.

Q. That is, the snow tank operated entirely independently of the press and was not modified or affected in any way by the operation of the press?

A. That is correct.

Q. And conversely, it is true that the press operated entirely independently of the snow tank?

A. That is correct.

Q. And the pressing operation that was performed by the press was in no way modified or affected by the proximity or operation of the snow tank? [339]

A. That is correct.

Q. You referred in your direct examination to Plaintiffs' Exhibit 8 which, as I understand your direct examination, discloses as now chamber 50 and a compression chamber 60, is that correct?

A. I did not refer to them in my direct examination, but that is correct.

(Testimony of Charles L. Jones)

Q. In that apparatus illustrated in Plaintiffs' Exhibit 8 the snow is formed in the snow chamber 50 at a time different from the time that the plunger is operated in the compressing chamber 60, is that correct?

A. I don't recall any such statement in the patent. I don't think I can really testify to that. That machine was operated by Cole and McLaren and I have never personally operated one of those machines under those conditions; that is, when we used them, we did not form snow at the same time the plunger was being operated. In other words, I agree with you as to my own operation of the press, but reserve the fact that I do not know how many ways the press has been operated by others.

Q. Now, referring to the operation of that press illustrated in Plaintiffs' Exhibit 8, the solidification of the CO_2 in the snow chamber 50 is not affected or modified by the operation of the pressure or compressing means in the pressure chamber 60, is it?

A. I would say it very definitely is. [340]

Q. Will you explain to the court how the operation of the plunger in the compressing chamber 60 affects or modifies the formation of the solid CO_2 in the chamber 50?

Mr. L. S. Lyon: For the purpose of the record, I would like to have it appear whether the question refers to the form of a chamber shown in Exhibit 8 or to the form which they have been talking about in Exhibit 5 of the patent.

Mr. Foster: My question—I thought it was quite clear, Mr. Lyon, but I am glad to clarify it if it is not—is directed to this plaintiffs' Exhibit 8.

A. That is Fig. 2, the press of Fig. 2 of the Cole and McLaren patent.

(Testimony of Charles L. Jones)

Q. The figure shown here is Fig. 1 on Plaintiffs' Exhibit 8.

A. The press, I think, is shown in more detail on Fig. 2, and is better shown.

Q. I fear that your counsel has not put in an enlargement of that.

A. All right; just let me have Fig. 1. In this form of press the chamber 60 has a different configuration when the plunger is retracted in the position shown in dotted lines as 61 on the print from its configuration when that plunger is advanced, that is, the chamber is 10 inches deeper at that spot, and the mechanical behavior of the chopped particles of snow coming down into that throat is quite different whether they are allowed to drop freely into a [341] 10-inch opening in the press or whether they are allowed to pile up on top of the plunger and the plunger then withdrawn and permitting them to drop into the press as a heap, as a mass.

Q. Possibly my question was not clear, Doctor. It is this: In the apparatus illustrated in Plaintiffs' Exhibit 8, Fig. 1 of Cole and McLaren, the solid CO_2 is formed in the snow chamber 50 entirely independently of the compression of the snow in the compressing chamber 60, isn't it?

A. It is independent in the sense that they are two separate operations performed in the same closed apparatus; yes.

Q. And the compression of the snow in the compression chamber 60 does not modify or affect the solidification of the snow in the chamber 50?

A. I have answered that. It does not affect the actual solidification, but it does affect the character of the charge of solid which is available for pressing the block.

(Testimony of Charles L. Jones)

Mr. Foster: May I borrow from plaintiffs' counsel this book of Mr. Jones' for a moment? I wanted to refer you quite briefly to page 206. May I hand it to the witness, if the court please?

The Witness: Surely. Thank you.

Q. By Mr. Foster: I have asked the witness to refer to his book which he referred to on direct examination, bearing the date 1936, entitled "Carbon Dioxide," and to page 206, where I [342] wish to read a very short statement, near the top of the page, if you please, Doctor.

"The process of producing solid carbon dioxide merely consists of the removal of sufficient heat from the gaseous and liquid forms to reduce the product to a solid state. This may be accomplished by proceeding along any of the lines used for the solidification of other materials, if the availability of the necessary apparatus be presumed.

"The general type methods may be classified as follows:"

And there follows an outline of a page and more, the second subdivision of which is:

"II. By self-evaporative cooling, in which the solidification of a portion of the carbon dioxide is effected by the vaporization of the remainder.

"A. Through evaporation of a bath of liquefied carbon dioxide withdrawing evolved vapor only from above.

"1. By very slow evaporation, adherent and fairly dense products may be made without subsequent pressing.

"2. In the more common practice, the boiling is conducted more rapidly to produce a porous mass of crystals which are subsequently pressed.

"B. By expansion of liquefied carbon dioxide directly to pressures below or at its triple point to produce 'snow', which is subsequently pressed or tamped to produce commercial blocks.

(Testimony of Charles L. Jones)

"1. By formation of snow in one apparatus and its [343] removal, redistribution, and pressing in a second apparatus.

"2. In self-contained presses in which deposition and pressing take place in the same chamber."

That statement of your book is as true today as in 1936, isn't it, Doctor? A. I believe so.

Q. On your direct examination, Doctor, you referred in a commercial production of CO₂ snow to the presence of water snow as an impurity; that is invariably present, isn't it, Doctor, in the commercial product? A. No.

Q. In products made with the Cole and McLaren apparatus, commercial products, do they contain any water snow? A. They may or they may not.

Q. This water snow which you say may be formed in the Cole and McLaren apparatus is formed as the result of the reduction in pressure upon the gas containing water, is that correct? A. No.

Q. What is the reason for precipitation of water snow in the Cole and McLaren apparatus?

A. The reduction in temperature rather than in pressure, as we have already pointed out. The pressure would have to be about four millimeters in order to freeze the water by a reduction of its own pressure.

The Court: Or approximately, in part, by the moisture [344] being in the influent?

A. Entirely. I supposed that was the question, that is, with the moisture in the influent is what caused it to freeze in the press.

Mr. Foster: That was the intention of my question.

A. I answered by its lowering of temperature.

The Court: I was not sure that the record was clear that that was what was meant.

(Testimony of Charles L. Jones)

Mr. Foster: Thank you, your Honor.

Q. This formation of water snow that you say takes place in the snow chamber of the Cole and McLaren apparatus occurs just as it does in nature, doesn't it, that is, there is a reduction in temperature which causes the formation of water snow from the water vapor just as it occurs in nature in the mountains here or in the eastern part of the United States?

A. I am afraid that gets us into a waste of time. It would be very lengthy and involved to answer that. In nature we have some five or six definitely recognized different forms of snow and ice. We have hail, we have sleet, we have slush, we have frothy ice, we have—

Q. Let me try to simplify your task with another question, then, Doctor.

A. Unless you specify some form of snow,—

Q. Isn't it true that water snow is formed by nature sometimes merely by a reduction in temperature upon water vapor, just as it is in the snow chamber of the Cole and [345] McLaren apparatus?

A. No. I am saying "No" for a reason. Snow is formed in nature only when water vapor is cooled as the diluent with air. If you take a vessel, flask, filled with water vapor, and nothing but water vapor, and reduce its temperature, you do not get snow; you get the ice on the walls of the vessel. And, in the same way, the water in this case is diluted. not with air, but with liquid carbon dioxide. and its properties and its fineness and its distribution will vary according to the history of the particular block of carbon dioxide.

Q. I think this question will clarify it. In the snow chamber of the Cole and McLaren, when water is formed

(Testimony of Charles L. Jones)

it is formed because there is a reduction in pressure upon the water vapor contained in the liquid CO₂ as a diluent, just as snow is formed in nature by a reduction in the temperature of the water vapor contained in the air?

The Court: Now, read that question, please.

(Question read by the reporter.)

A. No. Without burdening the record, didn't you mean "temperature" instead of "pressure"?

Mr. Foster: Yes; I did.

A. Reduction in temperature?

Q. Reduction in temperature.

A. Where the question says "reduction of the pressure"?

The Court: That is why I had him read it. [346]

Mr. Foster: With that correction, would you answer?

A. With that correction, I would say "Yes."

Q. And then, as I understand the compressing operation of this CO₂ snow containing some water snow, the snow is compressed under conditions that permit the escape of gas therefrom in the Cole and McLaren apparatus?

A. That is true.

Q. Would it be possible to compress the CO₂ and water snow produced in the Cole and McLaren apparatus without permitting the escape of gas from it, to produce a practical commercial product?

A. I can't answer that. I never tried it.

Q. Well, don't you know, Doctor, as the result of your studies and your experience of squeezing a snowball of water snow when you were a boy, in your hands, and the air coming out through your fingers, that as a practical matter it would be impossible to compress this mass of CO₂ and water snow produced in the Cole and McLaren

(Testimony of Charles L. Jones)

apparatus unless you permitted the gas to escape from it during the compression? A. Not at all.

Q. To produce a product that would be stable?

A. Not at all. I can't follow you.

Q. The analogy seems to you far-fetched?

A. The analogy is not accurate at all, because in the one case you have air entrapped in the pores of the snow-ball which has to be expelled or it will prevent the particles of [347] water snow from touching. In the other case you have, at least in the Cole and McLaren press, comparatively pure carbon dioxide in the pores of your block, and on application of pressure that carbon dioxide will condense and solidify.

Q. All of it contained entrapped in this solid?

A. All of the entrapped gas may be condensed and solidified in the block without in any way preventing the formation of the block. You then face the difficulty that you have internal pressure in the block which may and will explode that block if it is suddenly released from that pressure. It does not follow at all that it can't be done. In fact, I have pressed material in the Cole and McLaren press which had such entrapped gases, and by holding it for a sufficient period of time for the temperature to equalize throughout the block, for the center of the block to become cooled to the same temperature as the outside of the block, the block no longer explodes. Now, you see where this is not a commercial question. In ordinary commercial practice, yes; it is desirable to permit the escape of gases from the block and to accomplish that as quickly as possible.

Q. Not only desirable, but necessary, isn't it, Doctor, for commercial operation? A. I presume so.

(Testimony of Charles L. Jones)

Mr. Foster: I have had a conference with my colleague, Mr. Miketta, and have attempted to limit my cross-examination so that, although we represent different defendants here, we [348] would not duplicate and unnecessarily consume the time of the court. And this, I think, is all at present.

Mr. L. S. Lyon: I assume maybe we had better have the record show that the testimony of this witness on cross-examination would apply to all the defendants, irrespective of which counsel asked the questions.

Mr. Foster: I would like the record to so show, your Honor.

The Court: It may so show. I would like to have you, in so far as possible, avoid duplication. I recognize as a fact that in cases of this kind sometimes it is not possible; that every now and then a question will slip in or an answer will slip in that is duplication. But try, all of you, in your cross-examinations to avoid any more duplication than is necessary.

Mr. Miketta: Yes, your Honor. We have attempted to plan our examination with that in mind.

Cross-Examination.

Q. By Mr. Miketta: Dr. Jones, will you please refer to Plaintiffs' Exhibits 5 and 6?

The Court: 6 is a sheet, isn't it? Here it is.

Mr. Miketta: May I hand this to the witness, your Honor?

The Witness: Thank you, yes.

Q. Am I to understand that the picture, Exhibit 5, was taken at the Maspeth plant? A. Yes. [349]

Q. And the plant was owned by Liquid Carbonic Corporation, was it not? A. Yes.

(Testimony of Charles L. Jones)

Q. And the manufacture of dry ice was carried out in this plant by Pressed Air Corporation?

A. I believe so. At the time I saw them, I believe the name of the company was called "The Dry Ice Corporation of America."

Q. Dry Ice Corporation of America. Do you recall, Dr. Jones, that the snow tank was used at Maspeth during 1925 and 1926?

A. I can't answer that. I didn't see it in either year.

Q. You did not see it.

A. I was not familiar with the operation at all.

Q. Just for your own information, I am informed that in October or November of 1926 the snow tanks and production equipment were moved from Maspeth to quarters located in the General Carbonic Company's plant at Sixth Street and East River in Long Island. Do you recall that move?

A. I heard that such a move was made and the same equipment was, at a later date, returned to its original location in Maspeth, Long Island.

Q. Do you recall who took that photograph, Plaintiffs' Exhibit 5?

A. I could not recall that, because I don't know who did take that photograph. That photograph came into my possession [350] subsequent to seeing the equipment, and I am not certain of the date. It could have been taken either before the equipment was moved to the General Carbonic Company's plant, or it could have been taken after it was returned to the General Carbonic Company's, after it was returned from the General plant to the Liquid plant.

(Testimony of Charles L. Jones)

Q. Yes.

A. I would not be positive. I am a little suspicious that the photograph may have an error in that regard. It may have been taken at an earlier time, because it shows apparently a toggle press with a collection of the cylindrical molds, which I have never seen operate and have no knowledge of the operation. It is entirely possible that the photograph may have been taken at a somewhat earlier time.

Mr. Miketta: I had not examined the original, Dr. Jones, but I understand there was a notation on the back. May I see the original?

Mr. Morris: Yes, sir.

Q. By Mr. Miketta: Do you recall whether that notation was in your own handwriting?

A. It was, but it was made at a much later date.

Q. A much later date.

A. So that it would not imply that the photograph was taken on a definite date.

Q. I wanted to refresh your recollection regarding that move to the General Carbonic Company's plant and—
[351]

A. This photograph may have been taken prior to the time when I saw the snow tanks and show some differences in the detail.

Q. Can you check me on this, Dr. Jones: That Dry Ice Corporation operated at this Sixth Street and East River plant until the fall of 1927, and at that time the snow equipment was moved to Yonkers plant of Syrup Products Company?

A. No; I cannot. Some of the equipment was moved to the Yonkers plant and production was resumed at the Maspeth plant of the Liquid Company.

(Testimony of Charles L. Jones)

Q. By whom?

A. Both by the Dry Ice Corporation of America—that is, after operating in the General Carbonic Company plant, I believe that the Dry Ice Company operated both in Yonkers and also at Maspeth, and some equipment from Long Island City went to both points; just what equipment, I could not testify. I believe that Mr. J. W. Martin, who was chief engineer of the company at the time, would have a much more accurate and correct detailed knowledge of that than I.

Mr. Miketta: May the record show that the original of Plaintiffs' Exhibit 5 is marked "Return to C. L. Jones, Maspeth, 1927"? That, you stated, was in your own handwriting, Doctor?

A. That is correct.

Mr. L. S. Lyon: May the record show, your Honor, that [352] Mr. Martin is the witness referred to who is here in the courtroom?

Mr. Miketta: That is correct, your Honor.

The Witness: May I say in respect to this photograph, that I had no connection with the operation of any of these plants until the late fall of 1928, and testimony prior to that time on my part is merely that of a bystander.

Q. In referring to Exhibit 6, which is the schematic diagram of the snow tank operation, was the liquid CO_2 inlet provided with a valve?

A. It was.

Q. And the CO_2 gas outlet was also provided with a valve?

A. It was.

Q. And both the inlet valves and the outlet valves were operated to admit and shut off the supply of liquid CO_2 into the chamber?

A. Correct.

Q. Were those valves operated in the same manner that the valves to which you have referred in connection with Exhibit 7 were?

A. No; they were not.

(Testimony of Charles L. Jones)

Q. In what way was the operation different, sir?

A. The liquid carbon dioxide inlet valve was closed when the platform balance showed the accumulation of a desired weight of solid.

Q. In other words, when you accumulated a desired mass of [353] solid carbon dioxide in the snow tank, then the inlet valve was shut off, is that correct?

A. That is correct.

Q. And the outlet valve was kept open throughout that period of time?

A. That is correct.

Q. And when was that shut off?

A. That was closed off after the carbon dioxide inlet valve had been closed and at approximately the same time that the manhole itself was opened.

Q. You are referring there to Exhibit 6, is that correct?

A. That is correct.

Q. Do you mind placing on Exhibit 6 in your own handwriting, or making a little diagram indicating the location of the inlet valve, Dr. Jones?

A. These inlet valves were variously placed. When I first came into the picture I had a Lunkenheimer valve placed at some little distance from the tank itself so that union could be more easily broken; and I would indicate that diagrammatically in this fashion (diagramming on exhibit). I even happen to remember the number of the valve.

Mr. Miketta: Let the record show that the witness has plotted a pencil line running from the lefthand end of the device labeled "Liquid CO₂ inlet," running to a union and then continuing downwardly to a level beneath the bench and then toward the right to near the margin of Exhibit 6, at [354] which point the witness has indi-

(Testimony of Charles L. Jones)

cated a valve by a cross and the words "Lurkenheimer No. 721-1/2-inch-inlet valve."

Now, Dr. Jones, will you please indicate where the valve was located that was associated with the CO₂ outlet?

A. I have added a schematic representation of a line leaving the opening marked "CO₂ out," extending upward and to the right I have indicated a valve by a cross in the margin, accompanied by the words "2-inch outlet."

Q. Thank you, sir. In your testimony you have referred to the Martin patent as having shown the location of your CO₂ outlet, is that correct? And I would like to have you—

A. I do not believe that I did so testify. I testified that this portion of the drawing was taken from the patent drawing of the Martin patent.

Q. That is correct. And when you referred to the Marin patent you referred to patent No. 1,659,434, is that correct? A. That is correct.

Q. I call your attention specifically to Fig. 2 of that patent and ask you to compare Plaintiffs' Exhibit 6 with Fig. 3 of this Martin patent. Is it not true, Dr. Jones, that the Martin patent shows the snow tank divided with a reinforced top, the reinforcing being indicated by a channel iron? A. Yes; that is correct.

Q. And the CO₂ outlet is indicated by the numeral 11 in Fig. 3, is it not? [355] A. Yes, it is.

Q. In speaking of Exhibit 6, you referred to a filter cloth? A. Yes.

Q. Is it not a fact, Dr. Jones, that the patent describes this so-called filter cloth as consisting of canvas reinforced with galvanized iron mesh on both sides, and in

(Testimony of Charles L. Jones)

that connection I specifically call your attention to page 3 of the patent, lines 33 to 37, where it is stated:

"As shown more clearly in Fig. 4, the screen consists essentially of a canvas layer, 55, clamped between a lower wire net, 56, and an upper wire net 57, each of which may be made out of four-mesh galvanized iron wire."

A. That is correct.

Q. Without causing you the inconvenience of changing Exhibit 6, we can assume that Exhibit 6 is supposed to represent the Martin snow tank as shown in the patent; is that correct?

A. I have Exhibit 6. That is a correctly described schematic representation of this patent drawing. It does not depict it in every particular. Martin also shows a reinforcing member around the lower portion of his inner tank. However, the essential features of the snow tank were intended to represent the same operation.

Mr. Miketta: I would like to introduce, may it please the court, Martin Patent No. 1,659,434, as Defendant's [356] Exhibit B.

The Court: It may be received and so marked.

[Note: Defendants' Exhibit B will be found in the Book of Exhibits at pages 1359 and 1500.]

Q. By Mr. Miketta: To what extent was this inner chamber of the Martin snow tank filled with snow at the end of a run, Dr. Jones?

A. The practice varied somewhat in that particular, and sometimes, and I am testifying from memory, the common size snow tank was filled with about 400 pounds of snow. However, we customarily filled them, at the

(Testimony of Charles L. Jones)

Elizabeth plant, during my time there, to only 300 pounds of snow, but it would not be packed so tightly. [357]

* * * * *

The Court: Very well. Then the exhibit will not be placed in evidence, but will be merely marked for identification for the purpose of explaining this witness' testimony on direct and on cross.

Q. By Mr. Miketta: Dr. Jones, I believe you have indicated, in not all instances, but in many instances, that the snow tank was almost full of snow at the end of the run.

A. That is correct.

Q. And the snow was, therefore, piled in this snow tank to a height well above the door shown in Plaintiffs' Exhibit 6?

A. Yes.

Q. Did you notice the operators using a sharp-pointed spade in cutting around the door, after the door was removed, in order to extract from the snow tank a chunk or block of [359] snow?

A. Yes.

Q. When you referred to snow, on direct, as being fine, powdery, or chalky, you did not mean that the snow was loose like sand or dry flour?

A. On the contrary, in the snow tank the degree of packing of that fine, floury material depends entirely on the gross weight packed into the tank. That is the reason why we later found it desirable not to load the snow tank so heavily, so it could be more easily shoveled out. If the liquid valve be turned on for, say, only 30 seconds, allowing possibly 20 or 30 pounds of snow to enter the tank, and then the door opened, the material in there is so light and fluffy that it can easily be blown out with a compressed air hose, and it would not then be necessary to

(Testimony of Charles L. Jones)

use any implement on it; but it can be packed to a greater or less degree. It can be packed until it is quite hard.

The Court: The form of it would also depend, would it not, on the amount of moisture in the intake?

A. Yes.

Q. By Mr. Miketta: Is it not a fact that the liquid carbon dioxide used in the manufacture of snow is the same, as far as purity is concerned, as the liquid carbon dioxide that is used for carbonating beverages ordinarily, as of 1926 and 1927?

A. No. That question has a very involved answer.
[360]

Q. Maybe I can simplify it, and ask you, for example, considering the Maspeth plant that was owned by the Liquid Carbonic Corporation, they manufactured liquid carbon dioxide?

A. That is correct.

Q. That liquid carbon dioxide was being sold for carbonated beverages?

A. Correct.

Q. The same liquid carbon dioxide was also being used for making snow in the snow tank?

A. As to the Maspeth plant, that is correct.

Q. And your answer would be the same as concerns the General Carbonic Company's plant at Sixth Street and East River?

A. That is correct.

Q. Subsequently, in later years, when the plants were devoted solely to the production, let us say, of snow or block ice, then perhaps the degree of perfection of the liquid was not carried to as great an extent; is that correct?

A. It is correct, but misleading. It was not a question of degree of perfection; it was a question of a dif-

(Testimony of Charles L. Jones)

ferent source. That is, the impurities present in the source make a different solution of carbon dioxide, as different as petroleum from different fields, and what constitutes adequate perfection for beverage purposes in [361] one type or process has no relation to some other type of process.

Q. Aren't we simply talking about a content of impurities, of moistures or hydrogen sulphide, which perhaps does not amount to more than one-half of one per cent of the weight of the liquid?

A. No, I would say that impurities are to be viewed in the light of their industrial importance, and the losses they can cause, rather than percentages.

Q. So far as percentages are concerned; is that correct? A. What is your statement?

Q. That these various impurities at no time amounted to more than about four-tenths or five-tenths by weight of the liquid CO₂—four-tenths of one per cent?

Mr. L. S. Lyon: I would like to know what "at no time" means.

Mr. Miketta: It is confining the question and answer to the period prior to 1928.

A. No, the small impurities remaining in the block would be in all cases below the figure you have given.

The Court: Let me ask you: Carbon dioxide is odorless, colorless and non-irritating?

A. Yes, it is colorless. It has a pungent odor, which is usually considered non-irritating.

Q. There might be certain foreign substances in a [362] product furnished from a well that would have to be extracted before it was fit for human consumption in

(Testimony of Charles L. Jones)

beverages, and those might not be particularly objectionable in the making of dry ice for refrigeration purposes?

A. That is correct.

Q. In other words, you have two different problems. It might be that the same product could be used for both, and it might be that it could not?

A. That is correct. I would say the most serious effect of impurities had nothing to do with the ultimate use of the product, but rather with the effect on the structure of the block, as to its mechanical strength, its freedom from flaws and its ability to stand rough handling and transportation over long distances; and as little as $2/1000$ of one per cent of certain hydrocarbons is enough to promote the growth of a sandy structure and the disintegration of the mechanical strength of the product. As little as one-tenth of one per cent of water is also sufficient to have a very appreciable effect on the storage and handling characteristics of the finished product.

Q. In other words, the problems are different. You might not have to be as particular with the commercial product as with a product for human consumption?

A. That is correct.

(Short recess.)

Q. By Mr. Miketta: Dr. Jones, do you recall seeing [363] frost on the lines carrying the liquid carbon dioxide into the snow tanks?

A. At what plant? What year?

Q. During the period of time to which you have referred on direct examination, when you were describing the operation of snow tanks in 1927, or thereabouts?

A. At times, yes; at other times, no.

(Testimony of Charles L. Jones)

Q. I call your attention to Plaintiffs' Exhibit 5, and particularly to the white spots appearing immediately underneath the doors leading to the snow tanks, and ask if those are not frosted unions. A. They are.

Q. The temperature of the incoming liquid would have to be 30 degrees, or therebelow in order to cause frost? A. It would.

Q. So that in operating the snow tanks liquid carbon dioxide at temperatures below 60 degrees Fahrenheit were used? A. At times.

Q. Is it not a fact, Dr. Jones, that prior to 1926 it was known that the temperature of the liquid carbon dioxide affected the yield of snow, without regard to the type of equipment?

A. Oh, yes. I have explained that the refrigeration was used to the greatest extent that it was possible, and in accordance with the amount of money that was available [364] to provide such refrigeration, at all times; yes, indeed.

Q. And during those early years, say 1925 or 1926, the Dry Ice Corporation of America really did not have a great deal of money? A. That is correct.

Q. It was known, prior to 1926, that if liquid carbon dioxide was at a lower temperature you obtained a higher yield of snow; is that correct? A. That is right.

Q. It was also known, prior to 1926, that the incoming liquid could be chilled by either flashing off this liquid, or by heat exchange between the incoming liquid and the unsolidified exhaust gases from the chamber?

A. Will you read that back?

(Question read by the reporter.)

A. It was.

(Testimony of Charles L. Jones)

Mr. L. S. Lyon: I would like to object to this line of cross-examination upon the ground that it is not proper cross-examination, and is again an attempt to build up what is called the prior art—what was known and what was not known. I don't think it is proper on plaintiffs' case in chief.

The Court: I think this question is pretty close to borderline, but I will allow it.

Q. By Mr. Miketta: Dr. Jones, you have testified on direct that there was a pressure gauge connected to the [365] snow tank? A. Yes.

Q. Please indicate on Exhibit 6 where that pressure gauge was attached.

The Court: By a mark, do you mean?

Mr. Miketta: Yes.

A. There is no standard practice for that. We customarily placed that up in the top of the tank, however.

Mr. Miketta: Let the record show that the witness has drawn by hand a pressure gauge extending through the top of the snow tank, and communicating with the space between the filter cloth and the cover.

The Court: It may so show.

Q. By Mr. Miketta: On direct examination, Dr. Jones, you stated that the snow tanks were made of quarter-inch metal, or sometimes thinner. Can you state that a snow tank made, such as you have described, and a snow tank such as shown in Martin patent 1,659,434, is capable of withstanding internal pressure on the order, say, of 100 pounds, if it were made out of quarter-inch steel plate?

A. On the contrary, I have no doubt that snow tanks could easily be constructed to withstand any desired internal pressure.

(Testimony of Charles L. Jones)

Q. They were adapted to be operated at pressure above the triple point?

A. The snow tanks were not adapted to be operated at [366] a pressure above the triple point.

Q. They were adapted to withstand pressure above the triple point; is that correct?

A. I think we would have been in trouble with the authorities had we attempted to do so. I would like to make the reservation that the defendants' witness Martin probably knows the early practice better than I do myself. However, snow tanks which were purchased under my supervision were given a hydrostatic test in the manufacturing plant of 75 pounds per square inch. We allowed a factor of safety of 5 to 1 on the desired operating pressure of 15 pounds, and which we felt was adequate; but it would certainly be unsafe, and very definitely illegal, to operate a tank tested to 75 pounds at an operating pressure of 60 to 70 pounds.

Q. Dr. Jones, irrespective of whether or not you had permits to operate equipment at such pressure, is it not a fact that a snow tank, a Martin snow tank, made of one-quarter-inch steel, would be capable of withstanding internal pressure on the order of 100 pounds per square inch?

A. "Capable of withstanding" is ambiguous. I should say yes, they would be capable of withstanding it, but they would be utterly unsafe to operate at such pressure.

Q. May I ask whether 100 pounds is above the triple point of CO₂? [367]

A. Yes.

Q. On direct examination, Dr. Jones, you stated that the snow tanks gave a recovery of 15 to 30 per cent. In making that statement did you consider the following

(Testimony of Charles L. Jones)

which appears on page 2, lines 7 to 17, of Defendants' Exhibit B for identification or illustration, reading as follows:

"As a result, these various improvements, particularly the feature of snow formation near the bottom of the tank and the slow upward progress of the mixture, toward the screen, through the previously collected quantities of the snow, are very effective in facilitating the recovery of a relatively large percentage of the liquid, in snow form, the yield under good conditions being 40%, or even more."

Do you wish to change your previous answer?

A. No, I do not. What is the exhibit?

Q. That appears on page 2, lines 7 to 17.

A. This statement is a mere statement of the patentee that through the method he uses he gets relatively a large percentage of the liquid in snow form. I should say that regardless of what his invention may have been, or when he made it, the invention would have no effect whatever upon the percentage of solid formed in one pass of liquid delivered to his apparatus, which depends only on temperature of the liquid formed in it. I made the statement that [368] yields were 15 to 30 per cent, being the yields per pass. The statement in the patent is indefinite. It does not say whether it is meant yield per pass or the overall yield. However, a yield of 40 per cent, and I take this from a chart shown on—I don't know whether this is in or out—

Q. You are referring to your book? A. Yes.

Q. On what page of the chart, Dr. Jones?

A. 197. A yield of 40 per cent is attained at a temperature of 40 degrees Fahrenheit. Therefore, I would

(Testimony of Charles L. Jones)

say that the yield claimed in the patent was obtained at certain times through the use of cold liquid formed in the snow tank, but over the entire period it was much more common to encounter *warm* liquid at a temperature of 60 or 70 degrees which, again taken from the chart, would correspond to a yield of about 30 per cent.

Q. Dr. Jones, what was the lowest temperature of liquid carbon dioxide which you ever saw introduced into the Martin snow tank?

A. About 20 degrees Fahrenheit.

Q. On this question of yield per pass, or yield over a longer period, is it not a fact, that if you can recover 40 per cent, let us assume, under one pass, you will have 50 per cent recovery under five passes, and 60 per cent recovery under ten passes? [369]

A. No, it is not a fact.

Q. Would you mind assuming, for example, that you fed in 100 pounds of liquid CO_2 and obtained a 40 per cent yield, or 40 pounds of snow—

A. Yes.

Q. The next time, or next pass, since you are recirculating the unsolidified gas, you only need to add an additional 40 pounds of new carbon dioxide to the 60 which you had previously had; is that correct, and you again obtain 40 per cent?

A. No, it is not clear at all. You do not need to add anything when you return, or you may add 500 pounds. In order to keep the amount of carbon dioxide in the system constant you would add 40 pounds, replenishing the amount taken out as solids. Does that answer the question?

Q. That answers the question, thank you. Referring to the cost of operation of the Martin snow tank, to which

(Testimony of Charles L. Jones)

you have referred on direct examination, do you recall having made a speech before the Compressed Gas Association, in January, 1931, at which time you stated that the price of dry ice in block form, during the years 1926 to 1930, had been markedly uniform, just about \$100 per ton?

A. Yes, I believe that I did make such statement.

Q. At that time, I think you testified, that is, on direct examination, I believe you testified that during that period of time approximately, when snow was being made [370] in the Martin snow tanks, the labor cost of operating the snow tank and making blocks was an average of about \$7.00 per ton.

A. I took the figure of \$7.00 per ton from the series of daily operating sheets at the Elizabeth, New Jersey, plant, in August of 1928. [371]

Q. Well, that is fairly representative of a large plant?

A. It may vary quite widely from that figure for other plants and other times of year.

Q. Am I correct in assuming that the present cost, labor cost of manufacturing block ice, is somewhere around \$2.50 to \$3.00 per ton?

A. No; you are not correct.

Q. What is the figure, please?

A. I cannot give you such a figure.

Q. Well, is it very far from the accurate cost figure, labor cost?

A. I do not believe you have any basis for comparison. The figure for snow tank labor was only the labor for the snow tank room, that is, the actual solidification, and not the total labor costs of the process—

(Testimony of Charles L. Jones)

Q. Oh, I see.

A. —in any way, shape or form.

Q. That is correct; that is correct.

A. And on the same basis, the actual press labor, the labor for operating the press and making the solid blocks, varies at the present time from about 25 cents a ton to as high as \$1.25, I would say, depending on the size plant.

Q. For operating the press and for packaging the ice?

A. For operating the press, sawing into 10-inch blocks, and handling away from the site. That does not include all ice-handling labor, nor neither did the fixed \$7 figure [372] include all ice-handling labor.

Q. What is the average price at which dry ice is now being sold per ton—around \$40?

A. I do not believe I am competent to testify on that. I am willing to say "Yes" to your guess, if you want to advance one.

Q. Does \$40 sound like a reasonable sum for the present price?

A. \$40 sounds like a reasonable sum for the present price.

Q. In your book, on pages 207 to 209, you referred to the Martin snow tank and its operation, and stated there—I read from page 209, Dr. Jones:—"The comparatively simple and crude snow tank method is still in use, and is much misunderstood. While it is ill-adapted for quantity production and involves from 3 per cent to over 10 per cent loss in transferring the snow to open molds for pressing, it was designed for the purpose of exploring a market at minimum capital investment. For that pur-

(Testimony of Charles L. Jones)

pose it has not yet been surpassed in the art." Have I read that correctly?

A. You have read it correctly and I do not have any desire to change the statement.

Q. You were influenced, were you not, Dr. Jones, in making that statement by the fact that a snow tank cost only around \$400, whereas larger presses cost in the neighborhood of \$5,000 to \$7,000? [373]

A. Well, I don't know that your comparison is exactly right. I believe we got both snow tanks and presses at figures considerably lower than the ones you have mentioned.

Q. But there is a wide discrepancy between the capital investments required, is that correct?

A. The snow tank is a much cheaper method for capital investment.

Q. You have testified on direct, I believe, that the loss in handling was appreciably larger than that to which you refer on page 209 of your book. I think you testified that the loss ranged from 7 percent to 15 percent. Do you now wish to change your answer?

A. No; I do not. If you will permit me this form of answer: When the book was written I was endeavoring to avoid any statements which painted the industry in too black colors and I selected a figure somewhat low. I would say that the actual loss varied extremely widely. I was looking at one old record of a snow tank operation starting up in Jacksonville, Florida, where the humidity is high, the temperature is high, and because of the humidity, the molds and the whole apparatus is wringing wet almost as soon as the operation is started, and it showed a loss of 27 percent from the weight in the snow tank to

(Testimony of Charles L. Jones)

the weight of the finished block. So I feel that the figure of 7 to 15 percent, with an average of 10, is not unfair.

If you want to go on adding figures to the record, however, [374] I would say that at Elizabeth plant, where the operation was on a fairly large scale and fairly steady, that I believe the records would show losses of about 6 percent, 5 to 6 percent; and if you were searching for a figure that will present the snow tank in a favorable light, I would offer that figure and agree to it.

Mr. Miketta: May I introduce the pages to which we have referred, 207, 208, and 209, from Dr. Jones' book, as illustrative of his testimony, to be marked Exhibit C?

The Court: They may be marked for identification as Defendants' Exhibit C.

[Note: Defendants' Exhibit C will be found in the Book of Exhibits at page 1360.]

Q. By Mr. Miketta: You have stated, Dr. Jones, that in many instances, at least, the snow collected in the snow tank was well above the door and sometimes completely filled the tank? A. That is correct.

Q. Is it not a fact that the nozzle which is indicated by the numeral 33 in the Martin patent, Defendants' Exhibit B, is near the bottom of the tank? A. It is.

Q. And during operation liquid carbon dioxide would be entrapped within the snow held within the tank?

A. No; that is not correct.

Q. Well, as I visualize it, Dr. Jones—and I would like to have you clarify me—let us assume the tank is as high as the rostrum and we have a pile or mass of snow in it, [375] say, so high, two and one-half feet high, and

(Testimony of Charles L. Jones)

liquid CO₂ is being admitted into the bottom of this mass of snow; would not some of that liquid carbon dioxide be entrapped or retained, perhaps, for a short period of time, but entrained there within that mass by reason of the very low temperature of the snow and the pressure within that tank? A. No.

Q. How do you explain your answer, please, sir?

A. Liquid carbon dioxide has no existence below the triple point pressure; so that in order to entrap any such liquid in the snow there would have to be a pressure greater than 60 pounds per square inch in the mass of snow.

Q. Well, assuming there was— A. Excuse me.

Q. Pardon me.

A. There was a great deal of speculation and a great many words used to express what might be happening inside that opaque, non-transparent tank at the time under discussion, and I have heard a great many theories as to what might be the condition in that mass of snow. Each person connected with it apparently had his own way of expressing what went on. However, in order to believe that there is a liquid entrapped in that snow, when the pressure gauge at the point indicated showed 10 pounds, you would have to believe that there is a pressure drop through that mass of snow from 60 pounds in the lower portion to 10 pounds in the [376] upper portion. I cannot believe that. Perhaps someone else can.

Q. May I point to the exhibit? By referring to Exhibit 6, Dr. Jones, and perhaps to the Martin patent, you have indicated that the pressure gauge is connected to the area above this filter screen, is that correct?

A. That is correct.

(Testimony of Charles L. Jones)

Q. And is it not true that during the operation of the snow tank quantities of carbon dioxide would be held up against the bottom of that filter screen?

A. That is correct.

Q. And the snow itself is retained within this inner chamber, which in turn is inside the outer housing of the snow tank?

A. That is correct.

Q. So that there would be some resistance to the passage of gas from within the snow tank through the accumulated snow and through the filter cloth and screen before it entered the conduit to which the pressure gauge was connected?

A. That is correct.

Q. And under those conditions would a pressure differential exist between that shown by the pressure gauge and that existing within the snow tank?

A. Well, yes. This is a very indefinite pressure existing in the snow tank. I do not believe that I know of any measurements of just what that pressure was. However, [377] there is a pressure differential; yes.

Q. As I understood your testimony on direct, when higher pressures exist in an expansion chamber, the crystals of snow that are formed are larger?

A. That is correct.

Q. And when you have larger crystals you can produce denser and stronger blocks?

A. No.

Q. I perhaps misunderstood your testimony. What is the fact?

A. With larger crystals it is more easy to produce a dense block. However, the question of strength gets back into the question of how much water is present, how is it divided. The strongest products are the snow-ice products with the greater amount of impurities and pressed in cer-

(Testimony of Charles L. Jones)

tain ways. We are getting into an involved field there. In general, the coarser the crystal size, the easier the material is handled. Therefore, if you will accept that answer, the coarse crystal size is desirable and the higher pressure makes, of course, a crystal from the standpoint of easy operation.

Q. Very well. I apparently misunderstood your testimony, Dr. Jones. There was no attempt on my part to change it in any way, but it is a little difficult to follow at times. - I call your attention to Defendants' Exhibit B—that is the Martin patent—and particularly to the statement [378] appearing on page 3, starting at line 60; will you follow me on that, please? A. All right.

Q. The patent there speaks of the minimum pressure existing in the process and then states: "This minimum of expansion pressure will fluctuate, according to the resistance imposed by the increasing amounts of superposed snow and particularly by the thickness and density of the layer of snow that collects on the lower surface of the screen and, as before very fully explained, the internal pressure will rise in response to clogging of the outlet up to the full limit of the 1,000 pounds or more pressure of the source." Have I read that correctly? A. Yes.

Q. With that thought in mind which has just been read, was not the Martin snow tank adapted to operate so as to produce large crystals and triple point ice?

A. Oh, definitely not. Continuing—

Q. Assuming that the tanks were strong enough?

A. Would you care to continue reading the patent at the point where you left off?

(Testimony of Charles L. Jones)

Q. Is that going to be your answer?

A. I suspect so. I think that, in the first place, the statement as to 1,000 pounds says that that pressure will be produced in response to the clogging of the outlet.

Q. That is right. [379]

A. And I believe counsel has asked me whether there ever was a practical method of making CO₂ that had no outlet and compelled me to answer "No"; that you had to have an outlet or you could not make the stuff.

Q. Are you disregarding, Dr. Jones, that statement where it states that the pressure will fluctuate, according to the resistance imposed by the increasing amounts of superposed snow; is that correct?

A. We have covered that. I have stated that I am unable to believe that when the pressure gauge shows a pressure of less than 15 pounds, that the pressure in the body of the snow could be at the triple point pressure or higher. I have never seen evidence that would prove that such pressures existed in operation.

Q. Have you ever examined the snow made in the Martin snow tank and seen large crystals?

A. No. Define that "large," please.

Q. You can make your own definitions, Dr. Jones. You are the expert here. You have referred to large crystals, or crystals of large size, and I would like to know—

A. Perhaps, to clarify what you are getting at, I have observed variation in the crystal size in the Martin snow tank with pressure. We have also changed the operating pressure in the snow tank and operated it at 30 pounds pressure. I feel, at 30 pounds, we got a coarser crystal and a better type of snow than we got at 10 to 15 pounds.

[380]

(Testimony of Charles L. Jones)

Q. And the pressure gauge was connected to the outside channels and not to the interior of the snow tank?

A. That is correct.

Q. I call your attention—

A. I have never, however, either had any evidence that the triple point was reached, nor have we ever removed from the snow tank material such as is obtained at the triple point, nor do I believe we could remove such a product with the tools at our disposal.

Q. Why would that be so?

A. Because as soon as the mass of crystals in the chamber becomes wet by liquid CO₂ it has the same cementing effect to which counsel referred, I think, in last Wednesday as in the making of a snow fort, when snow is placed in a box and water is poured over it and frozen in order to harden the block, and the wetting of the snow in the chamber has precisely the same effect; it can be dug out of the box but it is obviously harder to dig out than the loose snow.

Q. It would be much more difficult, I grant you that.

A. Yes.

Q. I now call your attention to page 4 of the Martin patent, Defendants' Exhibit B, particularly to the matter appearing in lines 8 to 13, where it is stated: "Furthermore, after the tank is partly filled with snow, the upflow of the gas, against gravity, and in contact with pre-formed crystals of snow, promotes formation of the maximum amount of crystals [381] of maximum size."

A. That is a misstatement.

Q. That is a correct statement, is it not?

A. It is not. It is a misstatement. The fallacy in the statement lies in the fact that a crystal once formed can

(Testimony of Charles L. Jones)

only grow by having some medium around it to supply material for its growth and some method of cooling which will cause it to solidify. So that crystals, so placed, will grow very readily when surrounded by a bath of evaporating liquid. They can only grow when surrounded by an atmosphere of carbon dioxide gas if they have inherent refrigeration to cause that gas to condense, otherwise cold carbon dioxide can pass through them forever without increase in size.

In the same way, a snowstorm gives fine snowflakes, and those snowflakes only grow when the snow is descending through an atmosphere which has enough water vapor present under conditions that will condense that water vapor and cause the crystal to grow. Merely dropping through a great distance in dry air will not build the size of a snow crystal at all.

Q. But in this case, the crystals within the body of the snow tank were surrounded with an atmosphere of carbon dioxide gas and carbon dioxide vapor, were they not?

A. They were.

Q. And under such conditions do not crystals grow in size as they would in a saturated or supersaturated solution? [382] And in that connection, before you answer, Dr. Jones, I call your attention to page 80 or your book.

A. It is not necessary. Those crystals grow in two ways. They grow on storage—

Q. May I have a brief answer to my question, please?

A. I will try to.

The Court: Let us put it off until 2:00 o'clock.

The Witness: All right.

(Whereupon a recess was taken until 2:00 o'clock p. m. of the same day.) [383]

AFTERNOON SESSION.

2:00 o'Clock.

The Court: You may proceed.

CHARLES L. JONES,

recalled.

Cross-Examination,

resumed.

Mr. Miketta: Mr. Reporter, I believe there was a question on the record. Do you mind reading the preceding question and the last one?

(Record read by the reporter as requested.)

A. The two ways in which crystals grow are best illustrated by the case of a salt solution. In such a case crystals will grow on any change of temperature or saturation in which the total weight of crystals is increasing at the expense of the material in solution, and in this way crystals can grow quite rapidly. But if the—

The Court: Now, wait a minute. Let me be sure I got that. Would you read it, please?

(Answer read by the reporter.)

Q. By the Court: Change in temperature or change in saturation? A. Yes.

The Court All right; go ahead.

A. But if, without change of temperature or saturation, a saturated salt solution containing crystals is allowed to [384] stand, the crystals will again grow, but the gross weight of salt in the solution will remain the same and growth takes place by the disappearance of the smaller crystals and the growth of the large ones.

(Testimony of Charles L. Jones)

Q. By the Court: Combinations.

A. It is a transfer of material from the small to the large crystal, without the growth from an outside source at all.

Q. The individual crystal will grow but the total will not grow?

A. Will not change. In the case of the snow tank we get only the second type of crystal growth, and it is possible to close the snow tank with its charge and allow it to stand over a period of time, let us say, 24 hours or longer, and get an appreciable growth of crystal size, starting with, say, 300 pounds of snow, and neglecting normal heat absorbed from the atmosphere, ending with 300 pounds of snow. We do not get the first type of crystal growth in which the individual crystal is growing from the carbon dioxide being supplied to it during the forming period. This type is obtained, so far as I am aware, only in the triple point type of operation where a bath of liquid carbon dioxide is available to supply both the material and the refrigeration necessary to add material to the individual crystal.

Q. By Mr. Miketta: You do have a change in temperature, that is, a reduction in temperature from the temperature at [385] which the liquid CO₂ is introduced to a temperature, I believe, of about 109 degrees, minus 109, which is the temperature of the snow, do you not?

A. Yes; we do.

Q. Will you please again refer to Plaintiff's Exhibit 6, which is the diagram of the snow tank? A. Yes.

Q. As I understand your testimony, after the mold was tamped and filled with snow, a loose top plate was placed on top of that snow, is that correct?

A. That is correct.

(Testimony of Charles L. Jones)

Q. Is the inclined member of the central figure of that exhibit an edge view of that plate? A. It is.

Q. During pressing after that mold and its top plate were taken over to the press which is shown on the left-hand side, during pressing did relative motion occur between the top plate and the mold? A. It did.

Q. And was there any relative motion between the press or plunger which is the bottom member and the sides of the mold? A. There was.

Q. In effect that constitutes double pressing, does it not, double and bottom pressing? A. Yes.

The Court: Top and bottom pressing? [386]

A. Top and bottom pressing.

Mr. Miketta: Top and bottom pressing; that is right.

Q. And it is also a fact that it was known for a long time, since 1920, that pressing from both top and bottom increases the density because it reduces the heat-to-diameter ratio of the mold? A. That is correct.

Q. Does the patent in suit, the Cole and McLaren patent, describe bottom pressing?

A. No; I do not think it does.

Q. I believe you have stated that the photograph of Plaintiffs' Exhibit 5 shows in the foreground and to the left a toggle type press, is that correct? A. Yes.

Q. And I don't remember whether you stated whether you saw this in operation or not.

A. I stated that I had not seen it in operation and had no knowledge of its operation. It was prior to my connection.

Q. I won't ask you any questions about it, then, sir. When you visited the Maspeth plant did you at any time on

(Testimony of Charles L. Jones)

the occasion of such visit observe a press which is diagrammatically shown on the drawing which I hand you?

A. No; I didn't see any such press.

Q. You did not see one similar to that?

A. Neither at that time nor before nor after.

Q. Do you remember seeing any press at the Maspeth plant? [387]

A. Only an open vertical stock hydraulic press, I believe made by Watson-Stillman, and shown in the photograph, Exhibit—what is it, 5?

Q. 5.

A. —and indicated thereon in ink "W. S. Press," which is an open press of the type illustrated diagrammatically in Exhibit 6.

Q. Dr. Jones, did you see a press of the type shown on that drawing which I have just handed you in the yard or just outside the windows at the Maspeth plant?

A. No; I did not. At the time I was taken to the Maspeth plant I possibly did not belong to the select circle that might have seen everything that was available to be seen; and I saw only the installation that was then actually in use.

Q. Do you recall seeing such a press at the plant of the General Carbonic Products Company, Inc. in 1928?

A. I did not see any presses in the General Carbonic plant in 1927 and, in fact, was not in the General plant between about 1925 and the fall of 1928.

Mr. Miketta: I would like to introduce that drawing.

The Court: It may be marked Defendants' for identification next in order.

The Clerk: D.

[Note: Defendants' Exhibit D will be found in the Book of Exhibits at page 1363.]

(Testimony of Charles L. Jones)

Q. By Mr. Miketta: In 1927, Dr. Jones, you were particularly interested in developing sales for dry ice, were you not?

A. In 1927 I was employed as a consultant by the Dry Ice [388] Corporation, and I dealt with just such questions as they chose to ask me.

Q. Did you have anything to do with sales work, or the promotion of uses for dry ice?

A. Very little. They invited me to submit suggestions along any line pertaining to their business, with the utmost freedom, but those suggestions were usually submitted in the form of a letter, and I did not always hear what happened to them after they left my hands.

Q. Dry ice had been made for many years prior to 1926, had it not?

A. No, Dry Ice was a registered trademark, which was originated by the Dry Ice people, so far as I know, and was only manufactured from 1925, or possibly late '24.

Q. May I change my question? I was using dry ice generically, and not as a trade name. Is it not a fact that solidified carbon dioxide, in block form, had been manufactured and described in the literature as having been manufactured and used for many years prior to 1926?

A. I am not aware of any commercial—

Mr. L. S. Lyon: Just a minute. I object to that as not a proper method of proof, as to what had been described in literature; it is not a proper question on cross-examination.

The Court: Will you read the question?

(Question read by the reporter.)

The Court: Objection overruled. [389]

(Testimony of Charles L. Jones)

A. No, it is not a fact. The first commercial sale of which I had ever heard was in the fall of 1924. I have no way of knowing whether that was absolutely the first in history, but certainly it was the first I had any knowledge of.

Q. Will you please refer to your book, Dr. Jones, at page 193? I will read the beginning of that statement.

“Although carbon dioxide in the solid form has been applied to laboratory problems to some extent during the past century its industrial application for refrigeration extends back only a comparatively few years. Perhaps the first suggestion that solidified carbon dioxide might find application in commercial refrigeration is found in the patent specification of Tichborne and Elworthy. About the year 1907 Newth made this most interesting comment concerning the solid carbon dioxide industry in England: ‘Carbonic acid snow’ as this substance is sometimes termed, is now an article of commerce, the compound being sent into the market in this form to avoid the cost of the carriage of the necessarily heavy steel bottles containing the liquid.” [390]

A. That is Newth’s statement. I have never seen any evidence, beyond Newth’s statement, of a commercial sale, nor do I wish to change my previous statement. I see nothing conflicting between the statement in the book and the statement I have made. The first commercial sale of a block of solid carbon dioxide of which I have any knowledge was in 1924, in the United States. The patent to Tichborne, which is mentioned there, does not recite the making of blocks, but does recite the making of the solid form, in order to store the material without using steel

(Testimony of Charles L. Jones)

bottles, but apparently only contemplated making the snow, and holding it in a box, and reliquefying it.

Q. Does he then refer to the Elworthy patent, No. 7436?

A. Again the book speaks for itself, but I believe the statement is made that the first suggestion that it might find application in commercial refrigeration—that's the way it is stated—so far as I know, that is as far as Elworthy went, to make the suggestion that it might find application.

Q. When you wrote your book you knew that the Elworthy patent stated this:

“The compressing apparatus is indicated in Figure 1, m being a receptacle, below the chamber m, into which the carbonic acid snow passes, and is very forcibly compressed in the receptacle by means of a pressure ram actuated by [391] a hydraulic cylinder n, valves of the usual kind being provided by which water under pressure can be admitted into the cylinder n. When the snow has thus been compressed, the ram is withdrawn and the block of carbonic acid ice removed.”

I ask you if that has been correctly read, showing you a copy of British patent 7436, 1895, to Elworthy.

Mr. L. S. Lyon: I object to that as not a proper method of proof, and not proper cross-examination.

The Court: I think that is true.

Mr. Miketta: This gentleman has been making some rather general statements as to what has been done in the past, and has referred to his book. His book contains certain statements which I believe are contrary to the impression which he is attempting to leave with your Honor. I think we have a right to point out some of the inconsistencies in this witness' testimony.

(Testimony of Charles L. Jones)

The Witness: May I ask I said only my first knowledge of any commercial sale.

The Court: Maybe I don't understand. I don't see the inconsistency, and it does not seem to me that what is in that patent is material except possibly to cast some doubt about the accuracy of the statement in the book; but we are not trying that issue here. If you broaden it out we would not know just where we would come out. I think this laps over into the affirmative proof. If that [392] is the case, in so far as the prior art has application to the case, it should be done by your own witnesses rather than by this method. There is no fixed line, of course. I just have to use my best judgment as to where to stop.

Mr. Miketta: May I drop the subject, but before I drop it, may I have page 193 of this book, from which I read, introduced for identification, as well as the British patent?

The Court: They may be marked next in order.

The Clerk: The page will be E, and the patent F.

[Note: Defendants' Exhibit E will be found in the Book of Exhibits at page 1364.]

[Note: Defendants' Exhibit F will be found in the Book of Exhibits at page 1365 and 1538.]

The Court: Tell me this: Isn't the term "dry ice" now almost used like the term "aluminum"?

A. I believe so.

The Court: It is a trade name, but you refer to a certain product as dry ice, just as you refer to aluminum?

A. Yes, we always refer to it more like tabasco sauce. That is the name of a pepper, but it was introduced by some particular sauce maker.

(Testimony of Charles L. Jones)

Q. By Mr. Miketta: Dr. Jones, in the liquid carbon dioxide industry would you call a vessel, such as a tank or cylinder, an enclosed or sealed vessel, if it had a pin-hole opening in it?

A. A vessel for what purpose? I surely would call it a sealed vessel for some purposes, and not for others. I have, for example, at my home a teakettle which has a little whistle on the top of it, and it even has a plastic [393] canary for the purpose of warning me when the kettle boils. I call that a sealed vessel for the purpose of boiling water; certainly a sealed vessel for the purpose of blowing the whistle; but it has an opening in it. [394]

* * * * *

Q. By Mr. Miketta: Dr. Jones, by whom was Exhibit 7 and the various sheets forming a part thereof prepared? A. I prepared that myself.

Q. When did you prepare them?

A. The past week.

Q. Had you seen defendants' diagrams C, D, E, and F, which were submitted to plaintiff on April 12th, at the time [395] you made this exhibit? A. Surely.

Q. Are we to understand, Dr. Jones, that Plaintiffs' Exhibit 7 is based upon the press of Figure 5 of the Cole and McLaren patent and the process of that patent?

A. Yes.

Q. As I understand your testimony, Figure 5 of the patent in suit and the apparatus shown in Figures 1 and 2 of the patent in suit, are equivalents and relate to the same process?

A. I would not state that they are equivalents. They do relate to the same process; they are parts of the same patent. [396]

(Testimony of Charles L. Jones)

Q. And the press of Fig. 5 can be substituted for the press shown in Fig. 1?

A. It can be so substituted.

Q. And used to produce blocks of solid carbon dioxide? A. Yes.

Q. And the press of Figs. 1 and 2 of the patent is also for the purpose of producing blocks of solid carbon dioxide?

The Court: Just a minute, please. Will you read the question before leaving? Excuse me for interrupting, but I did not want you to go out yet. Go back and read that question from where he asks with regard to this Exhibit 7 and to its implications in so far as the patent in suit is concerned, the first question of this series.

(Record read by the reporter.)

The Court: "And the process of that patent," do you mean the method claims of the patent?

Mr. Miketta: Yes, your Honor.

The Court: Is that what you meant when you answered the question?

A. No; I did not particularize as to method claims or apparatus claims. In fact, it is the process and apparatus based upon the patent in suit, so far as I know.

Q. By Mr. Miketta: In other words, you consider the description in the claims to describe one method or a process, is that correct? A. No; I did not say that.

[397]

Mr. L. S. Lyon: I want to avoid this witness being interrogated about claims, because he has not been. I do not know that it would be proper for him to be interrogated about patent claims. There is no foundation laid that he is an expert on patent claims, and certainly we did not interrogate him on patent claims; and there-

(Testimony of Charles L. Jones)

fore, if counsel does so, he would be making the witness his own on that point.

The Court: Well, he made an answer there that I was not sure how it was going to be interpreted and I wanted to have it cleared up. I think counsel is entitled to clear it up, if it is not other than to make his answers clear. The objection will be overruled.

Mr. Morris: The question was inadvertently answered. May the answer be read?

The Court: Let us have the question and the answer read. Go back and read my question, and then what happened from then on, so there will not be any doubt in our minds as to what this witness testified to.

(Record again read as requested.)

The Court: Read that question again, because that is the unanswered question.

(Question read by the reporter as follows: "And the press of Figs. 1 and 2 of the patent is also for the purpose of producing blocks of solid carbon dioxide?")

Mr. Miketta: Now you may answer that question.

A. Yes. [398]

* * * * *

Q. The process, as I understand it, Dr. Jones, in which you described on direct, I think, does consist of the following steps: You first close your chamber, and the closing of that chamber is illustrated from the position shown in chart I to that shown in chart II, is that correct?

A. Yes. We are reviewing, step by step, the testimony [399] of the direct examination.

Q. Yes; very briefly. And let us go over that very briefly. And the second step is: You admit gas to that chamber from the high-pressure line so that a pressure of 40 to 60 pounds is built up in the chamber, and that is

(Testimony of Charles L. Jones)

illustrated in sheet III of Plaintiffs' Exhibit 7, is that correct? A. As an optional step that is correct.

Q. Well, that is what you testified to?

A. I testified that that was an optional step; yes.

Q. Then, the third step which you testified to and which is illustrated, is that you inject liquid carbon dioxide into the chamber until the pressure is above 60 pounds, say, 70 to 80 pounds, or wherever you want to go; and that is shown in Sheet IV, is that correct?

A. I believe there was considerable volume of testimony in the record as to that step, pointing out that a variety of products could be made and the pressure in the chamber might be at atmospheric to make snow, or it might be at triple point to make slush, or it might be above the triple point to make the triple point type of product. However, in the principal cycle which was discussed you are correct: it was intended to produce the pressures you have stated.

Q. Very well. Then, the next step, No. 4 on my list, is to shove off the supply of liquid carbon dioxide when sufficient liquid carbon dioxide is in the chamber; and that is illustrated on sheet V, is that correct? [400]

A. That is correct.

Q. Then, the fifth step was this: That when the pressure dropped to 60 pounds, boiling off took place and snow formation automatically took place, is that correct?

A. Solid formation took place; that is correct.

Q. Solidification of the carbon dioxide?

A. Solidification took place.

Q. That can be said to take place, perhaps, during sheet V also? A. I believe so.

Q. Now, the next step, the step 6, is that step illustrated probably also on Fig. V chart, during which the

(Testimony of Charles L. Jones)

pressure drops in the chamber after boiling off until equilibrium is reached between the high-pressure line and the pressure in the chamber, is that correct?

A. Yes; correct.

Q. And after that point is reached, we then take as step No. 7, let us say, the step of closing the high-pressure line and opening the chamber to a low-pressure line or to atmosphere, I believe you stated?

A. That is correct.

Q. And that is shown on sheet VI. Then, the eighth step was the pressing operation which is illustrated on sheet VII, is that correct?

A. Yes.

Q. While the chamber is connected to this low-pressure [401] line or atmosphere, is that correct?

A. That is correct.

Q. And finally, as shown on sheets VIII and IX, the block is ejected and the chamber is opened and the block is ejected from the chamber?

A. That is correct.

The Court: Well, in between there they start lowering the plunger to force out all the extraneous matters?

Mr. Miketta: That is correct, your Honor.

The Court: Used as a means optionally of pushing out the block?

A. That is correct.

The Court: Your other point about the option between 2 and 3 is merely a question as to whether you put in your gas at the inlet or start it from the outlet?

A. Or from the outlet.

Q. From the high-pressure point?

A. That is all.

The Court: All right. I just wanted the record to be clear on that.

Mr. Miketta: In order to visualize this operation, your Honor, I would like to have the witness follow an

(Testimony of Charles L. Jones)

arbitrary time and chamber pressure diagram which we can draw as we go along, keeping these various points in mind of various steps.

(Mr. Miketta diagramming on blackboard.)

We will assume that he starts with a closed chamber: in [402] other words, forget about sheet I which shows it open and start with sheet II which shows it in a closed position.

Q. Dr. Jones, as you have testified, the first thing that you do is that you open the high-pressure line valve and permit equilibrium to take place; and, may we assume, instead of saying 40 to 60 pounds in that high-pressure line, that we have, say, 50 pounds; would that be satisfactory? A. No; you may not.

Q. You referred to 40 to 60 pounds. I would like to have you select the figure there in the high-pressure line.

A. You mean in the high-pressure outlet for unsolidified gas?

Q. That is right. And you are referring now to sheets II and III?

A. To sheet No. III of the exhibit. Yes; 50 pounds would be—

Q. 50 pounds would be satisfactory? A. Yes.

Q. Well, I will go backwards if you don't mind. We will assume that the chamber—it is proper, is it not, to assume that the chamber was at zero gauge and when you opened the valve to the high-pressure line the 50 pounds pressure rapidly rose in the chamber to, say, 50 pounds?

A. May I ask whether the time shown on the board is minutes or seconds?

Q. Just units. [403]

Mr. L. S. Lyon: Of what?

(Testimony of Charles L. Jones)

Mr. Miketta: You can say that they are minutes, if you so desire.

The Witness: That would not be days.

Mr. Miketta: But that would probably crowd it over a bit, would it not?

A. Definitely that pressure would be reached in a very few seconds.

The Court: Well, let us assume that the space between zero and 1 is the length of time it would take for the pressure to go from zero to 50, and that is your unit.

* * * * *

The Witness: May I suggest that it be minutes and that your red line reach 50 in, say, about 10 seconds?

Mr. Miketta: All right, sir; I will try to do that. I [404] will move it over so as to be near to (diagramming further on blackboard). Is that better, Dr. Jones?

A. That is very good.

Q. So that at this point which we can call "A" you have established equilibrium of 50 pounds in that chamber, is that correct? A. Yes.

Q. Then, the next step which you perform is to introduce liquid carbon dioxide, is that correct?

A. Correct.

Q. And that causes pressure to rise to—will 75 pounds be satisfactory? A. Very good.

Q. And how quickly will it rise to 75 pounds?

A. Within another 10 seconds.

Q. Will it remain fairly constant there for a little while? A. Yes.

Mr. L. S. Lyon: That is not right starting up there.

Mr. Miketta: Let me have a little space on this, will you, please? It is a little difficult to crowd it all in so quickly. Will that be the—

(Testimony of Charles L. Jones)

Mr. L. S. Lyon: If your Honor please, that looks like it would take about at least three-fifths or four-fifths of a second, if "1" represents a second. The testimony shows it would take a tenth of a second for the first operation and a [405] tenth of a second for the next.

The Court: I think it is a little too delicate for his big piece of chalk. Let us make two of those represent that unit, and then it would be about right.

Mr. L. S. Lyon: Then, I would like to have him take that kink out there. There hasn't been any testimony that warranted that kink.

Mr. Miketta: Is this what you are referring to?

Mr. L. S. Lyon: That one right there (indicating).

Q. By Mr. Miketta: Is it not a fact that, as pressure reaches equilibrium, the rapidity with which it reaches equilibrium decreases as the rate of change decreases, Dr. Jones?

A. Oh, yes.

Q. For what length of time—now, you are going to keep that valve open until you have accumulated a sufficient quantity or admitted a sufficient quantity of liquid carbon dioxide into the chamber, is that correct?

A. Am I keeping this valve open or are you?

Q. Well, your third step was the injection of liquid carbon dioxide.

A. I mean, do you want me to tell you how long to keep it open, or do you want to draw the diagram and then ask me if it is correct? I am only trying to get at your own desire.

Q. According to the process which you have described, step 4 was the step of shutting off the liquid carbon dioxide [406] when a sufficient quantity of liquid carbon

(Testimony of Charles L. Jones)

dioxide has been accumulated in the chamber. You can set any arbitrary period of time.

A. It may be filled in one minute, let us say, which would end that operation about when you already have it, within about a minute and a half from the beginning, if the divisions are one minute each.

Q. All right. And let us call that point—I will try to letter it “liquid CO₂ shut off,” and that is that point. Where did the pressure curve go then, Dr. Jones?

The Court: Now, wait a minute. You are not going to have any straightening out of that line until you actually do put the shut-off, so that your shut-off ought to be back more closely to the top of the vertical line, and then it will remain constant for a certain length of time, anyway, won't it?

Q. By Mr. Miketta: Dr. Jones, for what reason will this remain fairly level for a short period of time?

A. During the filling, during the filling operation that will remain steady according to the proportion existing between the size of the inlet, the size of the outlet, and the pressure on the inlet gas while filling is taking place.

The Court: I got steps 1 and 2, but that was a third step that had not been explained on the diagram. I thought that was the next step you were coming to. That is bound to be true, of course, that, as it is adjusting itself, it is going to maintain a level pressure on the gauge? [407]

A. That is right.

Q. An even pressure on the gauge for a certain length of time. Now, what happens from then on?

Mr. Miketta: If your Honor will note, if I may add, that the high-pressure outlet is open throughout that period and the relative proportions between the inlet and the outlet openings reach equilibrium conditions again—

(Testimony of Charles L. Jones)

The Court: Yes.

Mr. Miketta: —so that your gas is going off all the time.

Mr. L. S. Lyon: I did not understand that, your Honor. I thought the witness testified that this thing was filled on a time basis, and not filled to an equilibrium; and that the introduction of the CO_2 was an entirely timed proposition, as he testified to it, and there is no basis in the record for a statement that it is filled to an equilibrium.

The Court: Isn't it a distinction without a difference? One is the result of the other. In other words, that is what actually happens, though you do it on a time basis because you have no other standard of measurement; isn't that the reason?

A. You do it only on a time basis and this other is merely a description of what happens while we are doing it on a time basis, but it is shut off, the chart shows, because it is a minute and a half, not because it is 75 pounds, but it is because our time is up. [408]

The Court: It is because you have learned that in that length of time with a certain amount of pressure, a certain sized aperture, you are going to accomplish that in a certain given time? A. That is correct.

The Court: If you had some other means of measuring it, you would not do it by time, so time is just a sensible way of doing it? A. Yes.

The Court: So I think we come to the same.

Mr. Morris: I wonder if I could make an inquiry here. I wonder if that isn't the filling time and the time—at least, the impression I got was the time required to put in the quantity that you wanted. Now, the consequence of putting in what you want may be what your

(Testimony of Charles L. Jones)

Honor has suggested or as the record indicates. I wonder if your Honor would care to ask Dr. Jones which is which, because, otherwise I think the record is a bit uncertain.

The Court: I think we understand each other, but maybe not. Go ahead and explain it.

A. The steady pressure shown on the chart at 75 pounds is the consequence of the filling operation and not its cause, and it is continued by a time schedule until the time when the court has described, the desired charge has accumulated, and then shut off at that time.

Q. It is the consequence of the filling process plus the [409] lapse of time; in other words, you open up your valve and you let a certain amount of time elapse; what happens in the meantime? The pressure goes up to 75 and during that period of time the pressure levels off and then you turn off your valve?

A. That is correct.

The Court: I think that is clear in the record.

Q. By Mr. Miketta: After that liquid carbon dioxide supply has been shut off, Dr. Jones, the pressure drops to about 60 pounds and boiling off and solidification takes place, is that correct?

A. That is correct.

Q. How rapidly will that reach 60 pounds? That, accurately, is 60.4, is it not?

A. Yes. I should say in half a minute or less.

Q. By the Court: Isn't it the reverse? Isn't it the boiling off that causes the reduction in pressure?

A. As has been explained, the word "boil-off" has come to have rather a special meaning of the boiling off at the triple point, so that during the half a minute, which I think has just been correctly drawn on the board, we are reaching what we call a boil-off period at the end of

(Testimony of Charles L. Jones)

the second minute. Actually, in the meaning of the English word "boil-off", all the time we are reaching that period we are even boiling off during the filling period in the sense we have a boiling bath of carbon dioxide with some ebullition or boiling [410] taking place and more or less gas leaving the chamber. In the special meaning of the word, however, we do not reach the boil-off period on the chart until the end of the second minute, because then our first crystal of carbon dioxide is commencing to form. We have no solid in the picture until then.

Q. I see. Then, in the industry you use that "boiling-off" to technically mean the point that we have reached now at the crossing of the vertical and the horizontal lines?

A. It is only that part of the boiling while a solid is being produced, as it has come to be used.

Q. All right. Now, just one more question before we go on. What causes the drop in pressure from 75 to 60?

A. It is the relief of the gas through the high-pressure outlet which causes the reduction in pressure.

Mr. Miketta: Your Honor will note that we have stopped supplying anything to the chamber at this point.

The Court: I understand it is being drawn off.

Mr. Miketta: And it is still being drawn off, so that now the pressure is being reduced because the gases are being led off through the high-pressure outlet and nothing new is being added to that chamber.

Q. Is that correct, Dr. Jones?

A. That is correct.

(Testimony of Charles L. Jones)

Q. For how long a period, Dr. Jones, will the pressure in the chamber remain at about 60.4 pounds? [411]

A. That may be any period within the discretion of the operator.

Q. Will it not automatically terminate as soon as all of the liquid has formed or converted itself into snow, or that part which can convert has been converted into snow or solid?

A. It will. However, that can be made to take place very rapidly or very slowly, as desired. It is customary to occupy, say, three to four minutes in accomplishing that step.

Q. For the purpose of this drawing board can we cut it down to two minutes, Dr. Jones?

A. Yes, sir.

Q. During this period of time from two minutes to four minutes the pressure in the chamber is uniform at the triple point, is it not?

A. Yes.

Q. Which is 60.4 pounds?

A. Yes.

Q. Is that correct?

A. That is correct.

Q. And that is one of the physical properties, inherent properties of liquid carbon dioxide?

A. For pure carbon dioxide.

Q. During that period of time between two minutes and four minutes solidification has taken place, is that correct?

A. That is correct. [412]

Q. Now, I indicate that solidification, then, as sort of a precipitation from that horizontal line just like snow formation. The next step was to close the—no; to keep the chamber connected to the high-pressure line until equilibrium is reached again at, say, 50 pounds; and how long would that take ordinarily?

A. Approximately 10 seconds.

(Testimony of Charles L. Jones)

Q. So we will draw a practically vertical line here indicating that after the snow or solidification takes place, the pressure will quickly drop, is that correct?

A. All right.

Q. After reaching that point, then it is my understanding that you close the high-pressure line and open the chamber to the low-pressure line or atmosphere, is that correct?

A. Correct.

Q. Since we started with atmosphere, do you mind if I go down to the bottom now?

A. Not in the slightest.

Q. How long will that take?

A. That depends upon what you do with that gas. If you intend to waste it, you can get down there very fast. If you want to save it, you will go down at a rate dependent upon the compressor capacity you have available to take it away.

Q. May I just arbitrarily end up here at 5? Thank you, sir. So that this last line now indicates the drop in the pressure chamber to atmospheric, is that correct?

[413] A. All right.

Q. Dr. Jones, when you opened your CO₂ inlet at this point A, which I will mark "CO₂ inlet open," did some snow formation take place for just a very brief instant?

A. None whatever.

Q. Did some snow formation take place as you released that liquid CO₂ into an atmosphere at 50 pounds pressure?

A. I am afraid I shall have to change my answer. There still would be a possibility of some slight snow formation; yes. I really don't know whether you could get enough under those conditions to detect. Theoretically it is possible there might be some.

(Testimony of Charles L. Jones)

Q. I will just show a very tiny bit of snow dropped off there. Is that satisfactory to you?

A. If it is sufficiently tiny, it will be satisfactory.

Q. So that in this process which you have described in connection with Plaintiffs' Exhibit 7, the liquid carbon dioxide inlet was shut off before you accumulated any snow or any solidified gas, is that correct?

A. That is correct.

Q. And if a very small quantity of snow formed immediately after you opened your inlet, that small quantity was probably dissolved in whatever body of liquid carbon dioxide was collected in that chamber? A. Yes.

Q. So that for that brief period of time you may have [414] had what you referred to as snowflakes in a pond, I believe, on direct?

A. Until they dissolved; yes.

Q. At that point A, just before you opened your inlet for liquid CO₂, that chamber was sufficiently tight to hold 50 pounds pressure, was it not? A. Yes.

The Court: Read that question, please.

(Question read by the reporter.)

Q. By Mr. Miketta: Will you please point out in the patent—

Mr. L. S. Lyon: Is that clear to your Honor?

The Court: Yes. I was not sure.

Mr. L. S. Lyon: The words "sufficiently tight" I understand would mean it was tight enough to hold 50 pounds, but not tight enough to hold 60.

The Court: I did not so interpret it.

Mr. Miketta: I object to counsel's inference.

The Court: He has not said anything about 50 to 60 pounds.

(Testimony of Charles L. Jones)

Mr. L. S. Lyon: I mean as to "sufficiently tight." Maybe your Honor understands it fully, but I am sure I do not.

Mr. Miketta: I think the witness understood it.

The Court: Then, the chances are I did not. I just thought I did.

Mr. Miketta: I would like to have counsel reserve some [415] of his remarks until he has a chance on redirect, your Honor.

The Court: Well, it is just what I told you, let every man conduct his own examination. I am limiting it to your question. Beyond that I am not going to have any imagination.

Q. By Mr. Miketta: Dr. Jones, will you please point out wherein in that patent there is any reference made to a high-pressure outlet connected to that chamber and a low-pressure outlet connected to that chamber?

A. I am very much afraid we are back to our definition of the schematic diagram. We have a single pipe 80 leading from the press chamber 50 and passing to a circle marked exhauster 81 and another circle marked diaphragm valve 84. The pressure and control characteristics in that pipe are determined by those two circles. I don't know whether I am competent to testify just what is inside the circle 81. I don't know.

Q. Does the patent tell you?

A. The patent defines it as an exhauster and says that it is used to maintain a definite pressure. As an engineer, if I were given the problem of maintaining a pressure in a chamber by attaching an exhauster to it, I would have a starting point from which to proceed to get such an exhauster and maintain such a pressure.

(Testimony of Charles L. Jones)

Q. But actually, you do not find two separate outlets or two separate lines, one of which is a high-pressure outlet and another of which is a low-pressure outlet, do you? [416]

A. No.

Q. In the process which you described in connection with Plaintiffs' Exhibit 7 and which has been illustrated on the board, you established a pressure of 50 pounds, or 40 to 60 pounds, as you stated on direct, in that chamber before you introduced any liquid carbon dioxide?

A. That is correct.

Q. Will you please point out where that is described in the patent in suit, that particular step of operation?

A. Oh, if counsel please, there are a great many things we have done with this press over a period of years that are not fully described in the patent. Our feeling with regard to it was that one of its principal merits was that it lent itself very flexibly and very adaptably to a wide variety of different schemes and hook-ups; and, to this day, many years after the patent was taken out, you will find individual plant engineers and operators exercising their own discretion, sometimes in violation of their direct instructions from their superiors as to how they will connect and operate a press in a particular case. But our feeling has been that one of the merits of the press is that it continues to deliver a good commercial product in spite of these vagaries.

The Court: Will you read that question, please, Mr. Reporter?

(Question read by the reporter.) [417]

The Court: Now, just for the record, how did you establish that pressure?

(Testimony of Charles L. Jones)

A. By opening the outlet valve marked "outlet for unsolidified gas—high pressure" in Fig. III of Plaintiffs' Exhibit 7.

The Court: Now you may answer the question.

A. I cannot point out to you this precise step in the patent in suit.

Q. By Mr. Miketta: You have already stated that in the process that you described in connection with Plaintiffs' Exhibit 7 a desired mass of solidified carbon dioxide is not collected in the chamber before the supply of liquid carbon dioxide is shut off; that is correct?

The Court: Read that question, please.

(Question read by the reporter.)

A. It is a sort of an upside down statement. I didn't remember of saying that.

Q. By Mr. Miketta: May I rephrase it? Do you understand the question, though?

A. I think I made the positive statement that the inlet was shut off when the desired amount had been accumulated.

Q. Well, will you please point out where that occurs?

The Court: Well, let's see. Let's see now. I'am not so sure that that is so, myself. I think you said the shut-off occurred when the desired mass had been accumulated.

A. Yes; the desired time had elapsed would be more [418] accurate, because actually the man operating the machine has no knowledge what is in that chamber except by inference. He turns it off by the clock.

Q. By experience, he relates it to a question of time, and when that time has elapsed you shut it off and let the Lord take care of what happens?

A. That is correct. [419]

(Testimony of Charles L. Jones)

Mr. Morris: May I inquire whether the questions are being answered as to a triple point operation, in which the liquid is charged in mass, or whether the questions include an alternative of the snowing process where the liquid is vaporized as it passes into the chamber? It seems to me the questions are being asked on one theory at times, and are being answered on another. I don't personally know whether the questions call for a triple point operation, or snowing operation.

Mr. Miketta: I think, your Honor, I have been very careful in this line of examination to adhere only to the process described in Plaintiffs' Exhibit 7, and now illustrated on the board. You so understood the questions, did you not?

A. I specifically stated, in connection with Plaintiffs' Exhibit 7, on direct examination, and again today that Plaintiffs' Exhibit 7 was in no way limited to the triple point operation, and I described in connection with it all three common types, and said that it could be used for any of the six methods described in the section from my book read into the record this morning from pages 206 and 207.

Q. Referring to the operation and to the process which is illustrated on the board, and which you testified constituted a process to be carried out in accordance with Plaintiffs' Exhibit 7, and limiting this question to just [420] Plaintiffs' Exhibit 7, your testimony thereon and the process as illustrated on the blackboard, is it not a fact that the step of shutting off the supply of liquefied gas to the chamber takes place before you make any solidified carbon dioxide? A. It is.

Q. Therefore, you do not shut off that valve to stop production of solidified carbon dioxide, but actually shut

(Testimony of Charles L. Jones)

off the supply of liquid carbon dioxide in order to initiate the production of carbon dioxide at a subsequent time?

A. As you have limited your question on the cycle illustrated in the graph drawn on the blackboard by counsel, the answer is yes.

Q. So that in the process which you have described, and which is illustrated on the board, the step of shutting off the supply of liquefied gas to the chamber to drop production of solid and gas therein after a desired mass of the solid has accumulated in the chamber, does not take place; is that correct?

Mr. Morris: I am objecting to it because the question assumes these words "according to the process you have described, and as shown on the board." I have not understood Dr. Jones to limit his description to a triple point operation. In fact, his direct testimony is that the apparatus may be operated in the snowing operation from atmospheric or sub-atmospheric to just below the triple point; then the [421] slush operation, the triple point, and the solid is just above the triple point. If the learned counsel is going to put in the two things "as you have described and as shown on the board," there is going to be a confusion.

The Court: What, Doctor, did you think you were permitting counsel to display? Suppose you give that the next letter, Mr. Clerk, for identification. I would like counsel to have that reproduced on a sheet of paper.

The Clerk: The chart do you mean?

The Court: Yes. What is the number of it?

The Clerk: G.

[Note: Defendants' Exhibit G will be found in the Book of Exhibits at page 1366.]

(Testimony of Charles L. Jones)

Q. By Mr. Miketta: Exhibit G shows the time pressure cycle in making the so-called triple point solid carbon dioxide—one of the processes which may be employed.

The Court: With that understanding I think you may read the question.

(Question read by the reporter.)

A. That is correct.

(Short recess.)

Q. By Mr. Miketta: Dr. Jones, is it not true that the step of shutting off the supply of liquefied gas to the chamber to stop production of solid and gas therein, after a desired mass of the solid has been accumulated in the chamber, is the step used in carrying out the Martin snow tank operation? A. Yes. [422]

Q. And it is the same step that was used by me in making snow in a canvas bag, was it not?

A. Yes.

Q. In the press which you have described, and illustrated in Plaintiffs' Exhibit 7, can you, by manipulating the valves cause that boil-off to take place at any other pressure but 64.4 pounds?

A. You can eliminate it altogether and cause the corresponding phenomenon to take place at any pressure you wish, as long as it is not over 60 pounds.

Q. Let us assume, Dr. Jones, that we have gone through the stage of admitting gas into the chamber; we have opened our liquid CO₂ inlet, and we have reached the point at 75 pounds where you have cut off your liquid CO₂ supply, and the pressure stops dropping, can you, by manipulating any valves from that point on, cause

(Testimony of Charles L. Jones)

formation of snow or solidification to take place at a pressure other than 60.4 pounds?

A. No, you cannot change the triple point of the material.

Q. The triple point is 60.4 pounds, is it not?

A. It is.

Q. And that is one of the natural inherent properties of liquid carbon dioxide?

A. Yes, if it is pure carbon dioxide. I don't know that I go along with stating the decimal point, and taking [423] the four-tenths of a pound too seriously, because it is not uncommon to have enough impurities in the material to cause that point to be anywhere from 59 or 62 or 63 pounds.

Q. Due to the presence of impurities?

A. Due to the presence of impurities.

Q. Just like salt water will boil at one temperature and distilled water will boil at a slightly different temperature; is that correct?

A. That is correct.

The Court: You answered, Dr. Jones, just a short time ago, and said that you could cause the boil-off to take place at any point below the 75 pounds.

A. I meant that he apparently was leading me through a particular diagram which he has placed on the board for a particular process called the triple point process, and that the chamber might be filled with snow at atmospheric, 20, 30, or any other desired pressure, but not above the triple point. He then limited his question to the diagram shown on the board, and I answered him that it could not be changed from the pressure he showed.

Q. In your explanation there, Dr. Jones, you refer to the fact that in the ordinary, let us say, Martin snow

(Testimony of Charles L. Jones)

tank process, you can make ice or snow at any pressure below 60 pounds; is that correct?

A. Counsel, in injecting the Martin snow tank process now in connection with the diagram on the board, are we dis- [424] cussing the Cole and McLaren press, or the Martin snow tank?

The Court: Eliminate the reference to the board and read the question.

Mr. Miketta: Let me reframe the question: The explanation you just made, Dr. Jones, when you stated that snow could be made, and solidification of liquid carbon dioxide could take place, at a pressure below 60 pounds, you referred to a process where liquid carbon dioxide is injected into a tank at a lower pressure, and snow formation takes place at a pressure of, say, 15, 20, 30, 50 or up to 60 pounds? A. I did.

Q. Is that correct? A. Correct.

Q. Referring to the diagram, Exhibit G, after the pressure in the chamber has dropped to atmospheric, as indicated by the red line hitting the bottom at 5, the next point in the process was to press or compress that snow or solid carbon dioxide, was it not? A. It was.

Q. So we can indicate a press operation by a horizontal red line along the zero line, and I will mark that "pressing." I call your attention specifically to chart 2 of Plaintiffs' Exhibit 7, wherein the closing head is shown spaced from the inner wall of the chamber. Do you notice that?

The Court: No, the plunger?

Mr. Miketta: The closing head also, your Honor, seems [425] to be spaced from the walls of the cylinder, or the walls of the chamber.

(Testimony of Charles L. Jones)

A. There is some clearance in every case. There must be, to make an operative device.

Q. I also call your attention—

The Court: You mean the top part of the closing head, the inner part of the closing head?

A. The boss.

The Court: That corresponds to the plunger?

Mr. Miketta: Yes.

A. You will observe, however, that the clearance between the boss and the lower mouth of the boss of the chamber is indicated nowhere near as great as the clearance between the plunger and the chamber. That, I may say, is purely accidental. I see no importance to the whole point unless there is some pointed out to me that has not yet come out.

The Court: What do you mean,—having any clearance at all, or do you mean the difference between the space between the plunger and the side wall and the top of the closing head of the side wall?

A. No, I mean that the record will show that we have stated the clearance around the plunger is there for the purpose of permitting release of gas and its recapture in the system. When we come to the boss or upper surface of the closing head, which seems to be the present question, [426] we have shown it with an appreciable clearance, and presses have been variously constructed with considerable clearance, some with bakelite plates at that point, some with no boss at all on the lower chamber, and I am merely stating that in the presses the amount of that clearance is not a vitally important point in the operation of the apparatus.

(Testimony of Charles L. Jones)

The Court: It doesn't make any particular difference whether there is any clearance there at all, except for the ability to get it inside the sidewalls of the chamber?

A. That is correct.

The Court: You can't accomplish any mechanical purpose than to get it in? A. That's right.

Q. By Mr. Miketta: Let us refer to the specific sheets A and B, which are a part of Plaintiffs' Exhibit 7. I understand your testimony to be that sheet A describes a completion of the pressing operation, during which the bottom closing head is first lowered slightly, and then raised during the completion of the pressing, so as to give the bottom squeeze effect; is that correct?

A. That is correct.

Q. If there is clearance between that boss or closing head and the inner walls of the chamber, gas escapes through that clearance, doesn't it?

A. If there is such clearance, gas does escape.

Q. Is it of any importance in the manufacture of the [427] dense block?

A. Whether that gas escapes, or can escape, or not?

Q. That is what I mean, yes.

A. The answer is, a very, very slight difference. Ample provision has been made in this design for the escape of gas, in other words, around the upper plunger, and in so far as it is practical to do so it is much preferable to permit that gas to vent upwardly around the upper plunger and return to the compressor system rather than to permit it to escape freely around the lower closing head, and be lost.

Q. I believe you have stated that the bottom head pressing is not described in the patent in suit?

A. It is not.

(Testimony of Charles L. Jones)

Q. Sheet B describes another modification, in which apparently you permit the closing head to move downwardly, or lower it slightly, and then allow the compressed block of carbon dioxide to detach itself from the walls and drop on the closing head?

A. That is correct.

Q. Do you find that modification described in the patent in suit? A. No, I do not.

Q. Referring again to sheets 6 and 7, you have described in connection with Exhibit 7, that pressing of the solidified material takes place after the pressure in the [428] chamber has been reduced to atmospheric, that is correct, is it not?

A. No, I have not so testified. I believe that my testimony was that the low-pressure outlet was open, and therefore the pressure— [429]

Q. Dr. Jones, I think it was at your suggestion, and with your approval, that we indicated that the pressure of the chamber was zero, and that pressing started after the pressure in that chamber came down to zero, down to atmospheric pressure.

A. Oh, yes, I would have permitted you with equal freedom to have designated that as anywhere between zero and five pounds. That, however, is your cycle; not mine.

Q. I would like to call your attention to your testimony, where you have testified in connection with sheet 6—

Mr. L. S. Lyon: What page?

Mr. Miketta: I will find it.

Q. Is it not a fact that you have testified in connection with this triple point process, on Plaintiffs' Ex-

(Testimony of Charles L. Jones)

hibit 7, that the low-pressure line shown on sheet 6 of Exhibit 7 was open to atmosphere?

A. That is correct, open to atmosphere or—

Mr. L. S. Lyon: I object to that as not a proper method of examination; not a proper method of proving what the witness testified to. We have the transcript of the record here, and if the witness is to be examined as to what he has testified to, he is entitled to see the transcript.

A. What worries me is, he is shortening my testimony by giving only a part of it.

Mr. L. S. Lyon: Wait a minute. The witness can be asked if the fact is true, but I don't believe he can be asked [430] if he testified so and so.

The Court: He can be asked, and he can answer, if he wants to. There is no objection to his answering, if he does not object to it, and someone else is not objecting.

Mr. L. S. Lyon: I am objecting.

The Court: The objection will be sustained.

Q. By Mr. Miketta: In testifying regarding sheet 6, Mr. Jones, on pages 287 and 288 you stated as follows:

“Passing to No. VI, marked ‘start of pressing period’, the CO₂ inlet remaining closed, in this step the high-pressure outlet has been closed and the low-pressure outlet opened. This operation is schematically shown here as two presumably manually-operated valves. However, in plants operating today this may be accomplished by a remote control, pneumatically-operated valve; it may be accomplished by a pressure-reducing valve mounted on the compressor in such a fashion that when flow stops through the high-pressure outlet the compressor is automatically transferred to the low-pressure outlet; in other

(Testimony of Charles L. Jones)

instances the low-pressure line is opened to the air or to a convenient part of the process system, where it may be recovered to where it flows away."

You testified in that manner, did you not?

A. Yes, indeed.

Q. That was the start of the pressing period?

A. That's right. [431]

Q. And pressing started after that low-pressure valve was opened?

A. That is correct. I find no place where I have stated that the valve is connected to atmospheric pressure, however. I said it is put into part of the compression system, as you have read my testimony.

Q. Let me quote it again: "In other instances the low-pressure line is opened to the air." What is the meaning of that? A. It is self-evident.

Mr. L. S. Lyon: That is not complete.

A. It is part of the statement.

Q. By Mr. Miketta: Does that mean that it is opened to atmospheric pressure?

A. That is a misstatement.

Q. I show you your testimony, Dr. Jones, so that there is no question as to what you have testified about.

Mr. L. S. Lyon: I call your attention to the fact that the predicate for the sentence is "in plants operating today" so and so is true.

Q. By Mr. Miketta: When you stated that that was opened to the air, did you mean that it was opened to atmospheric pressure? A. Yes.

Q. And after it was opened to atmospheric pressure, then the pressing operation started by the downward movement of [432] the pressing plunger, is that correct?

(Testimony of Charles L. Jones)

A. My statement is not so limited, but since your question is so limited, I have answered yes.

The Court: As I understand your statement is in the alternative; it might be opened to the air, in which event it would be diffused and lost, or it might be opened to some type of storage for the sake of saving. At any event, it would be a very low pressure; it might not be atmospheric pressure. Conceivably it might be at five minutes pressure? A. That is correct.

Q. Still it would not interfere with the operation of the device? A. Not at all.

Q. But it has to be a very low pressure in order for the apparatus to work? A. That is correct.

Q. I was only talking about an alternative of its being opened to the air. If it is opened to the air naturally the pressure is atmospheric pressure?

A. That is correct.

Q. By Mr. Miketta: After that chamber has been opened to atmospheric pressure, which we have indicated at the five-minute line on Exhibit 6, then the pressing operation starts, is that correct? A. Correct.

Q. So that you actually press the solidified carbon [433] dioxide while the chamber is at a low or atmospheric pressure? A. That is correct.

Q. Will you please refer to the patent in suit, and specifically point out where the patent teaches you to reduce the pressure in the chamber to atmospheric before pressing the block?

The Court: Change your question to read to atmospheric or to very low pressure.

(Testimony of Charles L. Jones)

Q. By Mr. Miketta: Or to a very low pressure. Thank you, your Honor.

A. On page 2, line 9 of the patent, and I am reading: "The exhauster 81 drives the low-pressure gas to an expansion tank 82."

Q. By Mr. Miketta: Is it your present opinion, then, that line 80 is at a very low pressure?

A. We have presented line 80 as a schematic illustration of a pipe. I don't believe that that pipe can be limited to any particular pressure, unless the patentee so limited it himself. I am sure I don't know how wide a range of pressure might exist in line 80. However, at this time of the cycle the point which I have just read indicates that at that time the exhauster drives the low-pressure gas to an expansion tank, implying that at that time line 80 is at a very low pressure.

Q. Line 80 is the only line attached to the snow chamber 50, is it not? [434]

A. And may, at different times, be operated at different pressures.

Q. Do you find any statement in the patent which tells you that the line 80 operates at a different pressure at different times? A. I can't say that I do.

The Court: Let us say that gas escapes from chamber 50 to the openings 52 into the jacket which is 53; then it gets from there into the pipe 80, doesn't it?

Mr. Miketta: That is correct, your Honor.

A. Yes.

Mr. Miketta: Fig. 2 shows that very clearly.

The Court: Now, it is going to have in conduit 80 approximately the same pressure it had in 53 and 52 and 50, isn't that correct?

(Testimony of Charles L. Jones)

A. I should say yes. I think that I may only just state, so far as I know, there naturally is no disclosure in the patent of many of the variations or permutations or methods of using the apparatus, which have since been used by the industry. In other words, so far as I know, this patent is not a complete disclosure of the modern practice of utilizing this device.

Q. When the patent states: Mechanically-applied pressure to the mass of solidified gas in the chamber, while the chamber is closed, to press the mass into a dense block of solidified gas, and finally opening the chamber to the [435] atmosphere and removing the completed block therefrom,—doesn't that mean that the compressing takes place while the chamber is closed to the atmosphere?

A. Are you reading from a claim now?

Q. Will you repeat the question?

(Question read by the reporter.)

Mr. L. S. Lyon: If your Honor please, I think the witness has a right to find it in the patent, or has a right to have it pointed out in the patent, the statement, and what the context is.

The Court: He can, if he needs it; if he doesn't need it he doesn't have to.

A. I would like to know what claim is being read to me.

Mr. Miketta: Do you understand the question, Dr. Jones?

A. I understand it, but it is a part of a statement taken from a longer statement, which may or may not be a patent claim, or may or may not come from the patent in suit. I would like to hear the whole statement; naturally, I am suspicious of a phrase.

(Testimony of Charles L. Jones)

Q. It is a complete statement, is it not? A. No.

Q. I am just asking about that step of applying pressure to the mass of solidified gas in the chamber, while the chamber is closed, to press the mass into a dense block of solidified gas, and finally opening the chamber to the atmosphere. —What do you get from that statement in the [436] patent I have just read to you?

Mr. L. S. Lyon: I submit the witness is entitled to either have the statement located in the patent for him, so that he can see what the context is, or he has a right to have the language read, and to find it. If it is a statement in a claim, we object to it upon the ground that the witness has not been put on the stand to interpret the meaning of phrases in this patent. We have not qualified him to do so. We have not tendered him in any such function, as that is a matter for the court rather than the witness, in any event.

The Court: The objection is sound. I don't think he has been qualified. If he had been qualified, he would be usurping my function, so the objection will be sustained.

The Court: * * * [437]

* * * * * * * *

Now, this man has been put on the stand primarily as a factual witness. He has testified as to an apparatus with which he was familiar, which very apparently is a part of the art during the period of which he was speaking. He also said that the apparatus was made after the indications in Fig. 5 in this patent in suit. Then he produced Exhibit 7, which is a motion picture of his idea of Fig. 5 in that patent. In other words, it is the

(Testimony of Charles L. Jones)

way the apparatus operated to accomplish a certain objective,—am I correct, so far? A. That's right.

The Court: He only is an expert to the extent that on direct examination he described this particular apparatus; he indicated, even on direct examination, that he was not interpreting the claims; that he was simply showing how this particular apparatus, with which he was familiar, operated. I might not think that the apparatus was covered by the claims at all. I don't know what I am going to think, but just assume that I do not; many times an apparatus is made which [438] some man thinks is disclosed by the patent claims, and it is not disclosed at all. He is making something that is not covered by any patent disclosure.

I think the objection is sound. This man is not qualified as an expert in the interpretation of claims. I doubt very much if there is any benefit to be derived from cross examining him to attempt to determine by him whether or not this apparatus that he has indicated in his Exhibit 7 is disclosed in the patent. [439]

* * * * *

The Court: * * * You indicated your qualifications to testify here as an expert; you indicated your experience with a particular manufactured product, so that you might be able to testify factually as to what you have actually observed. Now, without any particular regard to the patent in suit, you testified as to a certain apparatus which, in your view, and by your reference, was the apparatus indicated in Figure 5 of the patent. You didn't make any references to any statements with regard to the claims of the patent, and you did not attempt to indi-

(Testimony of Charles L. Jones)

cate what was disclosed by the drawings of the specification as to the claims of the patent. Is that correct?

A. That is correct.

Q. Now, you went from there to a description as indicated in the schematic drawing, Exhibit 5, of your idea of how Figure 5 worked, as you saw it applied in the industry?

A. That's right. [441]

The Court: Purely as a matter of how you saw this thing done. That was a factual proposition, and you were simply giving me a moving picture of the operation.

A. Of the operation.

Q. And you stopped there? A. Yes.

The Court: I don't that he has qualified himself as an expert on this patent, or on the reading of the patent. That is going to be my job ultimately. Now, you have examined him on cross examination at length with the objective, I presume, of ultimately showing me that what he has described is not covered by the patent.

Mr. Miketta: Yes.

The Court: That is ultimately what you are going to do. Well, leave that to me. I don't feel that this is proper cross examination of this particular witness.

Mr. Miketta: I am simply attempting to elicit additional facts from him, your Honor, as to the operation of the equipment to which he has testified.

The Court: If you want to go further into the factual situation, or if you want to go further into the operation of the particular device which he has described, do so, but don't read him a portion of a patent claim, and say to him, Did that apparatus do that? Because I think that is what I have got to do in this case, if I understand what my responsibilities are. You may know these things a lot better [442] than I do. I have had a little

(Testimony of Charles L. Jones)

hesitation in indicating my views, and I am just doing it from my broad experience in the trial of all sorts of cases, and, after all, the principles of pleading and proof are exactly the same, whether it be damages to a cow, a mail fraud case, or a patent case. I just have to keep within those particular issues, and the witness goes on the stand and testifies to one part of it, and then we piece the things out, as we go along; and I have indicated, I think, fully the scope of your testimony on direct examination, have I not? A. That is correct.

Mr. Miketta: As I view your Honor's remarks, I would like to go over my notes, and expedite the further examination as much as possible.

The Court: I am not trying to limit your cross examination. I am the easiest man in the world to get along with on cross examination, because I don't like to unduly limit it, if I think we are getting information, but I think you have got to keep in mind all the time the scope of the direct examination, and then apply the cross examination to it.

Mr. Miketta: I have a copy here of the diagram placed on the board, Exhibit G for identification, and I would like to have that marked in the same manner.

The Court: Let the other side see it, and then offer it tomorrow morning. It is just to illustrate his testimony? [443]

Mr. L. S. Lyon: It is not a correct copy.

Mr. Miketta: I suggest that I confer with Mr. Lyon as to any inaccuracies, and we can iron them out.

(An adjournment was taken until Wednesday, May 10, 1944, at 10:00 o'clock a. m.) [444]

Los Angeles, California, Wednesday, May 10, 1944;
10:00 a. m.

(Parties present as last noted.)

The Court: Are there any *exparte* matters? If not, you may proceed.

CHARLES L. JONES,

recalled.

Cross-Examination

resumed.

Q. By Mr. Miketta: Dr. Jones, from your testimony I have gathered that the strength of the walls of the chamber in which solidification of a gas takes place is a necessary factor which should be and must be considered?

A. That is correct.

Q. And among other necessary factors to be considered in building a machine for the solidification of gas is, perhaps, the size of the chamber with respect to the size of the inlet openings and outlet openings?

A. That is correct.

Q. Would you consider also the rate at which liquid gas is supplied to the chamber and the rate at which the unsolidified gas is withdrawn?

A. That is correct.

Q. Another factor which controls the resultant operation is the type of nozzle used. is it not?

A. That is correct, if any.

Q. Pardon? [445]

A. I added the words "if any."

Q. If any?

A. The type of nozzle used, if any.

(Testimony of Charles L. Jones)

Q. Well, does it make any difference whether a nozzle is employed or not?

A. If the liquid feed is at a sufficiently low pressure so that no restriction in the line is necessary, it makes no difference.

Q. So that you may say the kind of an inlet that you have is a factor to be considered with respect to the pressure of the incoming and liquid gas, is that correct?

A. That is correct.

Q. In your previous answer you have also considered, I take it, the size of the inlet opening?

A. That is correct.

Q. Another necessary factor to be considered, I believe, is the outlet for the unsolidified gas?

A. That is correct.

Q. And by that you specifically refer to the size of the outlet with respect to the inlet opening, is that right?

A. No. Your statement is not sufficiently inclusive, that is to say, if the outlet is big enough to do the work, it makes no difference whatever how much larger it is if somewhere in the line there is a suitable means for controlling the pressure in the chamber or the flow from it.

Q. By the Court: Well, that is just another way of saying [446] the outlet opening, the size of the opening in the outlet. If you have a valve in it that controls the size, what difference does it make whether the opening is in the valve or the opening is at the point of outlet?

A. None. I am only trying to avoid being limited to the size of outlet on the side of the chamber. The outlet in the sense of the whole portion of the apparatus by which the gas escapes, your answer is correct.

(Testimony of Charles L. Jones)

Q. Now, let me ask a couple of questions here. As I understand it, the source of the carbon dioxide is a shell or an evaporator in which the liquid is held under its own vapor pressure, 70 or 80 degrees. If you insert that into a chamber so close to its own freezing point that if you release it suddenly in atmospheric pressure, ordinary atmospheric pressure, you are very liable to have trouble with it?

A. You are going to freeze it up; yes. You will freeze up your inlet line.

Q. You are going to freeze up your inlet?

A. That is right.

Q. It doesn't make any difference whether it is in the form of a nozzle at the outlet or whether the opening is restricted, it operates just as a nozzle, anyway, doesn't it?

A. No, sir; I would not say so, that is, if you have cold liquid and lower the pressure in the chamber, when a nozzle is used at or near the face of the chamber, the pressure *drop*, and therefore the cooling effect, takes place in the [447] chamber. When that nozzle is omitted, that boiling and that cooling effect may extend all the way back through the feed pipe; so that when a nozzle is used and when trouble is encountered, the freezing is at or near the nozzle; when no nozzle is used, the freezing may extend back 10 or 15 feet from the press and involve filling in the pipe and connections with solid. Is that clear?

The Court: Yes, I understand that; that's right. I guess you did not understand me. It doesn't make any difference whether you have something, like on the end of a hose, which we call a nozzle, or whether you just

(Testimony of Charles L. Jones)

gradually restrict that at the point of outlet, the size of that opening operates as a nozzle anyway, doesn't it?

A. Yes.

Q. What you use this outlet for is to get a counter pressure, to have a little pressure in that tank to avoid that tremendous drop? A. That's right.

Q. That is what that is used for? A. Yes.

Mr. L. S. Lyon: Does your Honor understand—I am not sure that it is clear, that the witness testified the nozzles are not used at all with certain operations. I think the witness might clarify what your Honor has inquired about now, if he will explain under what circumstances nozzles are not necessary, and when they are used. [448]

The Court: If I am not interrupting you, Mr. Miketta.

Mr. Miketta: Not at all.

A. In making snow ice, that is, in filling the chamber below the triple point pressure with snow, a nozzle is invariably used, and the exact length, shape, and size of that nozzle is important. The use of an incorrect nozzle, incorrectly placed, will make quite a difference in the likelihood of trouble. When the triple point operation is practiced, however, the use of the nozzles becomes optional, if the liquid fed is sufficiently cold, so it is merely a question of transferring the liquid from one vessel to another. There would be a moderate difference in pressure between the two. There is no solidification during the filling period under the triple point operation, at all, except for the impurities,—water and oil in the liquid.

The Court: Which freeze at a higher temperature?

A. Which freeze at a higher temperature.

(Testimony of Charles L. Jones)

Q. By Mr. Miketta: In speaking of the outlet for unsolidified gas, as I understand your testimony, one of the things to be considered is whether provision has been made to associate that outlet with, let us say, a point of disposal for or with the atmosphere and the low-pressure outlet?

A. That is correct.

Q. Let us say, in instructing a man how to operate any of these various methods of solidifying a gas, there are other necessary factors, are there not, such as the type of [449] liquefied gas to be used? Isn't that a necessary item to be considered?

A. Hardly. In instructing a man in a plant, you have a plant that is producing indefinite liquid gas, and he has no choice about it. You tell him what to do, and he has been instructed.

Q. Let us say, in outlining the operation to be carried out, one of the first things that you necessarily have to do is to establish the type of liquefied gas to be employed in this prospective operation, is that correct?

A. I am not sure that it is clear. What do you mean by establish? You start to build a plant, to make solidified carbon dioxide. I suppose the first thing you have to do is to establish the fact that you are going to build the plant at all. You don't build the plant, and then decide what sort of gas you are going to solidify, no.

Q. Assuming that you are simply intending to solidify a gas, generically, the first thing you do is to determine what sort of gas you are going to use, is that correct,—whether you intend to solidify hydrogen, oxygen, methane, or liquid CO₂, or just what? Isn't that the first thing to be decided?

A. I don't know that that is a question that has any answer. The situation would never come up.

(Testimony of Charles L. Jones)

Q. Why not, Dr. Jones?

A. Let us get on with it by answering yes, that is correct. That is the easiest way to dispose of it. [450]

Q. Would you also consider the temperature of the liquefied gas to be supplied to the machine?

A. That is correct.

Q. And the pressure at which it is to be supplied?

A. That is correct.

Q. I gather from your testimony that you would also consider the amount and type of impurities present in this liquefied gas, depending upon the use to which the resulting product is to be put?

A. That is right.

Q. Would you also consider, as one of the factors, the pressure which is to be maintained in the chamber before supplying or admitting the liquefied gas thereto?

A. That's right.

Q. And another necessary element or factor to be considered is the pressure existing in the chamber during the formation of the solid product?

A. Those are all factors which must be taken into consideration at some time or another. For the most part they don't have to be considered in advance of constructing the apparatus, or even commencing to use it, because many of those factors, which seem to be just a list of variables that affect the operation, can be considered, and can be changed from time to time after the equipment is installed, without any physical change in the apparatus.

Q. Would you say that some of those factors you would [451] eventually determine as a matter of experimentation?

A. Yes, I presume so.

Q. One of the factors which control the operations and results obtained would be the pressure to which that solidified gas is compressed, would it not?

A. Yes.

(Testimony of Charles L. Jones)

Q. Would you also consider, as a factor in the operation, as one to be considered, whether or not the pressure in the chamber is reduced or released before the pressed block is ejected or removed from the chamber?

A. Yes, that is another variable.

Q. Dr. Jones, when did you observe the various operations and methods which you have described on direct examination, and on cross-examination, with respect to Plaintiffs' Exhibit 7 and its various adaptations shown in Sheets 1 to 9 and A and B?

A. The most recent instance was in the Los Angeles plant of the Liquid Carbonic Corporation, on last Monday or Tuesday, immediately preceding the trial.

Q. When was approximately the first time that you observed these methods being carried out?

A. In January of 1929.

Q. Where was that?

A. In the Long Island City plant of the General Carbonic Company.

Q. In that period of time have you observed any [452] substantial change in the process as indicated by your Exhibit 7?

A. No; I have observed that in different plants under different conditions different types of product were preferable. For instance, three years after the introduction of the triple point process, one large operation was swung completely back to the manufacturer of snow ice, because of the characteristics and properties of that ice being more desirable for the particular impurities that occurred there. On other occasions I have observed where the plant goes back to making slush ice, because of the difference in character of the raw material. I wouldn't say the process has been used without variation throughout that time. I

(Testimony of Charles L. Jones)

have observed, however, no fundamental improvement in the machine, and no change other than refinements of detail.

The Court: They were all Cole and McLaren machines? A. Yes, sir.

Q. By Mr. Miketta: By whom were those machines made, Dr. Jones?

A. By a number of manufacturers; the Cresson-Morris Company; the South Works Foundry and Machine Company; the Hydraulic Press Manufacturing Company; the Frick Company; the York Ice Machinery Corporation; the Charles Elms Engineering Works. That's about the list.

Q. Dr. Jones, you have referred to slush ice. Frankly, I still don't understand just what is embraced by this term, [453] and I would like to have you, if you don't mind, state again what you mean when you refer to slush ice.

A. Taking the defendants' Exhibit G, I guess it is, if the size of the outlet is increased in that example and everything else left the same—and by size of outlet I mean the characteristics of the outlet system, not merely the diameter of a pipe—so as to take the gas away more rapidly, if this change is made gradually and a series of blocks be made, the first thing that will be observed is that the filling pressure will be reduced. For example, we might make one block exactly as shown; the next block might have a filling pressure of 70 pounds.

Q. You mean this maximum would be reduced to 70?

A. Yes.

Q. Yes.

A. Everything else remaining the same; the next block might have a filling pressure of 65 pounds, everything else

(Testimony of Charles L. Jones)

still remaining the same; the next block might have a filling pressure of, say, 61 pounds. We would still be making triple point ice. The next reduction or the next increase in outlet rate would not produce a further decrease in filling pressure. The filling pressure would remain at the triple point but the length of the horizontal line representing the boil-off period would be decreased. That would then be in the slush range, the meaning of the shorter time being that part of the solid would be formed during the [454] filling period.

Q. In other words, instead of a very small amount of snow being formed immediately after the CO₂ inlet is opened, a larger quantity would be made?

A. A mixture, a mixture of liquid and solid CO₂ would be made throughout the filling period, which explains the use of the word "slush" to describe the product. If the outlet be further increased, the boil-off time is progressively less, giving a series of blocks made with drier and drier slush in the chamber, that is, a higher and higher proportion of the solid to liquid, until a block would be reached in which the pressure would go down as soon as the inlet valve was shut off. We would then have a block of snow ice; in other words, all of the solid would be formed while the liquid is entering the chamber.

Q. But even though you have what you term slush ice when, let us assume, the pressure just goes up gradually here to 60 pounds and moves down again quite rapidly, the ice or the product which you are pressing is not a slush; it does not contain any liquid at that point, does it?

A. No; it does not. It has the characteristics of the block of snow wet down with water and frozen in a block in a box referred to by counsel, I think, in connection with a snow fort.

(Testimony of Charles L. Jones)

Q. Is it not a fact that some attempt was made to press a slush ice as a slush at Niagara Falls at one time, with the [455] result that the blocks exploded or disintegrated upon shipment?

A. No. No. Let's see; just give me a minute. A number of expedients were tried at Niagara Falls plant involving variations in impurities and methods of pressing, which resulted in a very large number of exploded and fractured blocks. Some of these were made with pressure, some without, some snow ice, some slush ice, some pressed at the pressure of the room, and some pressed at higher pressures. When the block, regardless of the type of solid, was pressed with internal pressure in the chamber it was necessary to bring the pressure down gradually or the condition mentioned will occur, that is, the block will explode from internal pressure. Does that answer your question?

Q. Thank you. Just one more question. Can you give me the name of the plant that manufactured triple point ice and then went back to snow, dry snow?

A. Niagara Falls.

Mr. Miketta: Thank you very much. That will be all.

Redirect Examination.

Mr. Morris: Just two or three questions, Dr. Jones, please.

Q. I am not sure whether the term "filling pressure" has been used with two meanings or not. What would you say was the proper meaning that you have intended to give to filling pressure in your testimony? [456]

Mr. Miketta: May the court please, I would like to have counsel point to that page of the record where that was employed, so that at this time there is no further question as to what is meant or what was the context.

(Testimony of Charles L. Jones)

Mr. Morris: I have no reference to the record. What I had in mind was merely this: That the liquid that is being delivered to the apparatus is under a certain pressure. Now, whether the witness or counsel have used that or your Honor has understood it as being the filling pressure, I don't know. There is another meaning which was given to it only a few moments ago, which was the pressure in the apparatus at the moment of delivery. Whether those terms have been used to indicate one thing or the other may not be clear, and I wanted to see whether the record should be made clear with regard to that.

The Court: Well, I don't think there is any confusion.

Q. The initial pressure comes from the pressure in the container, does it not? A. Yes, sir.

Q. And that remains constant until it is released?

A. Yes.

Q. Or unless something happens to change the pressure back in the outlet pipe toward the container, but that is an unusual circumstance. When you referred to that pressure you were referring, were you not, to the pressure in the container? [457]

A. In the closed chamber of the press.

Q. That is right. A. Yes.

* * * * *

Q. How long had you been experienced in the CO₂ art when you first saw the apparatus of Fig. 2 of the patent in suit? A. The CO₂ art, about six years.

Q. In the solidification of CO₂ art, CO₂ solidification?

A. The solid CO₂ art, less than one year.

Q. When you first saw this apparatus did you see how it could be operated? A. I did.

(Testimony of Charles L. Jones)

Q. And understood how it could be operated?

A. Yes.

Q. For making snow ice? A. Yes.

Q. For making triple point ice? A. Yes. [458]

* * * * *

A. The question now, then, is: Do the presses, do the presses which I have seen and from which the drawings of Exhibit 7 were prepared have provision for controlling the inlets and the outlets. Yes; they do.

The Court: That is it exactly.

Q. By Mr. Morris: Dr. Jones, you were asked certain questions yesterday or the day before with regard to the Martin patent which was marked for identification. In one of the questions you referred to the next sentence as not having been included in the question. Will you tell me what lines of the patent to Martin, 1,659,434, were included in the question and the sentence to which you referred as not having been included by the learned counsel for defendants?

A. The question included page 3, lines 60 to 70; and continuing, I read from line 70. The patent says: "Hence, so long as only impalpably small quantities of the snow get through the screen, or are crystallized out in the upper space after the gas gets through the screen, such snow will be sufficiently taken care of by re-vaporization due to the heat which will leak through the insulation, 2, and the safety valve will function for satisfactory governing but, if the snow chamber overflows and ruptures the screen, the large amounts of snow released will clog the outlet to the safety valve, as well as the outlet 11. Experience shows that the piling up of pressure that then occurs, will blow [460] the top off of the tank before it will blow the passages free from the snow. Hence, the great advantage

(Testimony of Charles L. Jones)

of having the entire apparatus on scales whereby a run can be continued until the tank has been filled with snow to the maximum safe limit, with a certainty that filling beyond this limit will be indicated, regardless of the internal pressure."

Mr. Morris: If your Honor is clear on this question, I shall be glad to withdraw it. I just want to make certain that the ultimate distinctions between snow operation and the triple point operation are entirely clear of record.

Q. Dr. Jones, what can be your line for supply pressures upon the liquid in the pipes through which delivery of the liquid to the solidifying apparatus is had during a snow operation?

A. It may be any pressure from triple point up to 1500 pounds per square inch.

Q. At what pressures, if it is to be a snowing operation, must be maintained in the apparatus, pressing apparatus, solidifying apparatus?

A. Any pressure below the triple point.

Q. Is the liquid in the snowing operation charged into the apparatus as a liquid, or is that the operation in which a nozzle is sometimes used to produce a spray or vaporization at the time of the delivery of the liquid to the solidifying apparatus? [461]

A. There is no spray in the sense of liquid particles, that is, the operation to which you refer, the nozzle produces a spray-like discharge of solid particles.

Q. But there is no body of liquid supplied to the solidifying apparatus in the snowing operation?

A. No.

Q. There is a body of liquid supplied in the triple point operation?

A. Yes.

(Testimony of Charles L. Jones)

Q. The reason it can be supplied in the triple point is because the pressures in the apparatus are above the point at which the liquid delivered rapidly vaporizes?

A. Because they are above the point at which a liquid is possible.

Q. Above the point at which—

A. The point at which a liquid is possible.

Mr. Morris: That is all.

The Court: Any further questions?

Recross Examination.

Mr. Foster: Just a few, your Honor.

Q. Dr. Jones, when you referred to the time when you first saw a device like your exhibit Plaintiffs' Exhibit 7, in your answer to your questions from Mr. Morris, was that press in operation when you first saw it?

A. No; it was not.

Q. When did you first see it in operation? [462]

Mr. L. S. Lyon: If your Honor please, I don't think this is recross examination.

The Court: Yes; I think so. When did you first see it in actual operation?

A. During the early part of December, 1928.

Q. By Mr. Foster: And when with respect to that time did you first see the machine not in operation?

A. During December, 1938, and January, 1929, the patentees, Cole and McLaren, took me to the General Carbonic Company's plant and showed me the machine which had just been delivered, and was just ready for initial operation, of this form of vertical machine, and I co-operated with them and made numerous trips to the General Carbonic Company's plant, in the course of which we experimented with this machine; tried different nozzle

(Testimony of Charles L. Jones)

sizes; different arrangements of piping, and made tests to attempt to determine what the capacity of the machine was going to be, and what we could do with it.

Q. Prior to this occasion on which you first saw a machine like Plaintiffs' Exhibit 7, not in operation, Mr. Cole and Mr. McLaren had explained to you what they intended to do with the machine, that's true, isn't it?

A. No, I don't think that is quite right. We were familiar with the horizontal form of machine which had operated for some time, and Cole and McLaren explained that they had already developed a vertical design of the same general type of machine, and this vertical form was about to [463] be delivered. They said they believed, because of the larger block size, making four cubicle blocks instead of one, they could get more capacity out of the vertical form. However, the methods of the use of that apparatus, and some of the different applications of the device, were evolved among the three of us during discussions that took place in that period.

Q. And by various adaptations, you refer to various uses and adaptations you have described in your testimony for making blocks of different characteristics, is that true?

A. Yes, that is correct.

Q. Have you given the court now all of the substance of what Mr. Cole or Mr. McLaren told you with respect to this machine, prior to this date when you first saw a machine like Exhibit 7?

A. Frankly, I don't know.

Q. Have you given all the substance that you recall of what they told you?

A. They told me also about the subdivisions in the chamber which could be used to make four cubes without sawing. They discussed with me the control of pressure on the machine, and made the statement that their blower

(Testimony of Charles L. Jones)

system, which they used to control pressure on the horizontal machine, would work equally well on the vertical machine. That is about all.

Q. This horizontal machine to which you have just [464] referred, for making solid CO_2 , did it make triple point CO_2 ?

A. That machine was not, to my knowledge, ever so employed. We did, at a later time, have a horizontal machine of somewhat similar characteristics, known as the Goosman machine, in which we made the triple point form of solid at that time. However, I know of no previous manufacture of triple point solid in that machine.

Q. Was the horizontal machine, to which you have referred in your recent answers here, and with which you were familiar prior to the first occasion on which you saw a machine like your Exhibit 7,—was that horizontal machine adapted for the production of triple point ice?

A. I do not know.

Q. Was this discussion you have referred to, with Mr. Cole and Mr. McLaren, prior to the occasion when you first saw a machine like Plaintiffs' Exhibit 7, and in which you say various adaptations were worked out by the three of you?

A. That is correct.

Q. Did you suggest the adaptation or use of the machine for making triple point ice?

A. Yes, I did.

Q. Who was present when you suggested that?

A. I really don't recall.

Q. Mr. Cole was there, wasn't he?

A. No, when I first suggested that method of operation of that press—please read the question back. [465]

(Question read by the reporter.) A. Yes.

(Testimony of Charles L. Jones)

Q. Mr. McLaren was there, wasn't he?

A. I think probably.

Q. Who else was there, to the best of your recollection?

A. I am not certain, but I think that Mr. W. H. Fitzpatrick, of the Dry Ice Corporation, was present at the same time.

Q. Who else? A. No one else.

Q. Where did this conversation take place?

A. In the Long Island City plant of the General Carbonic Company.

Q. Can you fix the date for us, please?

A. I cannot exactly. It was during December, 1928.

Q. Will you tell the court exactly what was said with respect to the making of triple point ice, in that conversation?

Mr. L. S. Lyon: If your Honor please, I would like to renew my objection. This is not recross examination. It seems to be far afield of the direct examination.

The Court: This is not a renewal of your objection. I think it is an entirely different one. Objection sustained.

Q. By Mr. Foster: You read, Dr. Jones, on your direct examination a passage from the patent of Martin. Was that passage which you read a true statement with respect to the [466] operations you observed of the Martin snow press? A. My answer would be, only hearsay.

Q. Then I don't care for your answer. Your answer is, you don't know from your own observation?

A. My answer is no snow tank was ever exploded under my supervision in a plant of the Dry Ice Corporation.

Mr. Foster: Nothing further.

Mr. Morris: That is all. [467]

HARRY W. COLE,

a witness called by and on behalf of the plaintiffs, having been first duly sworn, testified as follows:

The Clerk: State your name, please.

A. Harry W. Cole.

Direct Examination.

Q. By Mr. Morris: Mr. Cole, will you give us your full name and address?

A. Harry W. Cole, New Rochelle, New York.

Q. You are the Harry W. Cole mentioned in the patent in suit?

A. I am.

Q. Mr. Cole, will you be good enough to tell us whether you are a graduate of any college or university, and if so, what?

A. I hold a bachelor of science degree from Amherst College, Amherst, Massachusetts.

Q. What year, Mr. Cole?

A. Class of 1915.

Q. What were your occupations from 1915, generally speaking, until, we will say, 1928? I am interested only in those which have a bearing upon the CO₂ industry.

A. I had had some experience before that, in 1908 and 1909, in the natural CO₂ field in Saratoga Springs, New York, where they were at that time recovering gas from mineral water wells, compressing it for liquid CO₂. On December 1, [468] 1915, I was employed by the General Carbonic Company at their Buffalo, New York, plant. I remained there until May, 1924. When I left there I was manager of the Buffalo plant. In 1924 I was made manager of plants for the General Carbonic Company, and I held that position with the General until February 1, 1928. I was then employed by the Liquid Carbonic Company as district superintendent of gas plants, eastern divi-

(Testimony of Harry W. Cole)

sion, until December, 1930, when my employment with them was terminated, and since then I have not been directly connected with the production field of either liquid or solid carbon dioxide.

Q. Will you be good enough to tell me when you and Mr. McLaren first conceived of the vertical machine of Fig. 5 of the patent in suit?

A. That was conceived by us during the latter part of the summer of 1925.

Q. Was that before or after your conception of the machine of Fig. 2 of the patent in suit?

A. We thought of the vertical type machine first, and as the outgrowth of our discussions with respect to it, and the problems in connection with it, we developed a horizontal type of machine.

Q. With which of the machines did you make your experiments, if any? A. With the horizontal type.

Q. Did you find any problems to be solved with that [469] machine?

A. Yes, there were many problems.

Q. What were some of those problems and their solution, Mr. Cole? To be more specific, did you find any difficulty or problems with respect to the delivery of the CO₂ in liquid state to the vaporizing chamber in the apparatus illustrated in Fig. 2?

* * * * *

Q. By Mr. Morris: The question is, what difficulties or problems confronted you in your experiments of the apparatus of Fig. 2 of the patent in suit?

A. The problems that confronted us were those which were imposed by the various characteristics of carbon dioxide, which weren't entirely known to us, although, as

(Testimony of Harry W. Cole)

the machine was originally constructed, there was first a spiral member in there, which was intended to assist in the delivery of [470] solid CO_2 which might be carried up into the expansion chamber, and back down into the compression chamber. That didn't work, and the first thing that we tried was a cutter in there.

Q. My first question is limited to the delivery of CO_2 to the vaporizing chamber or solidifying chamber of Fig. 2 of the apparatus; if you will just confine your answer to whether you found any difficulties in delivering CO_2 in liquid form to the vaporizing chamber, then I will go to the next question. [471]

A. As that first machine was designed, and attempted to be run, it had a spirally wound coil in the compartment between the outside jacket and the inner expansion chamber, the purpose of which was to refrigerate that coil by the expanded gases and the return going to the return conduit. We were never able to produce any solid in that machine for the reason that the repeated expansion of the carbon dioxide in the machine resulted in the crystallization or solidification of the carbon dioxide in the coil itself, so it would soon block itself off.

Q. Was the coil to which you refer the coil in which the incoming liquid CO_2 was being supplied?

A. Yes.

Q. What effect, Mr. Cole, did the crystallization of some of the CO_2 in the delivery pipe have upon your ability to get a discharge of that into the vaporization or solidification chamber of the apparatus of Fig. 2?

A. We couldn't get it in.

(Testimony of Harry W. Cole)

Q. How did you solve that problem?

A. The coil was removed, and the liquid inlet line was directly connected with the nozzles at the lower end of the chamber.

Q. Was that the end of your difficulties, or did you find new difficulties?

A. We ran into new difficulties in the handling of the solid product after we were able to get a solid product [472] produced in the machine itself.

Q. After you were able to get the delivery of CO₂ to the apparatus of Fig. 2, were you able, immediately thereafter, to get CO₂ solid in the apparatus?

A. We got solid, but we didn't get the finished product; that is, the compacted solid, because, as soon as the solid was produced in there that developed other problems.

Q. What became of the solid that was then produced in the upper chamber of the apparatus of Fig. 2? Where was it deposited?

Mr. Foster: I wish to object to this question, and this line of questions, on the ground of indefiniteness as to time.

The Court: I think it was during the process of this study. It didn't last more than two or three months, did it?

A. I would say it carried on, the actual experimental work with the machine went on from about the 1st of November, 1926, until probably April or May of 1927.

Mr. Morris: You may proceed to answer the other question.

A. May I have the question again please?

(Question read by the reporter.)

A. With the attempted operation of the spiral member it became— [473]

(Testimony of Harry W. Cole)

The Court: I think that was Mr. Foster's point; was it before you took that spiral member out or afterward? His objection is directed to that.

Q. By Mr. Morris: Initially there was a spiral member between the solidifying chamber and the pressing chamber, was there not, Mr. Cole, of your apparatus of Fig. 2? A. No, the spiral member—

Q. I am sorry. I used spiral member when I meant spider.

A. Yes, there was a cross member or spider at the bottom of the shaft. It was a bearing point.

Q. The function of it was what?

A. It was a bearing point for the lower end of the shaft.

Q. In the solidifying chamber, what apparatus was there initially?

A. Initially there was a screw spiral, which was rotated with the idea of pushing the snow down through the bottom of the chamber and delivering it to the compression chamber.

Q. What were the consequences of your using the rotating spiral member in the upper chamber of the apparatus of Fig. 2 of the patent, while the spider remained between the upper and the lower chambers of your apparatus?

A. The spiral member did not do a good job of delivering [474] ing the solidified CO₂ at the bottom. The snow would feed in the neck or throat, between the upper and lower chambers, and tend to close that off, and the spiral member merely made it worse, and would choke off in there, and we couldn't get it down into the lower chamber for pressing purposes.

(Testimony of Harry W. Cole)

Q. What did you do to try to get it down, Mr. Cole?

A. We tried all kinds of bars, of course; one thing and another, to dislodge it. That was unsatisfactory. The spider or cross member at the bottom was removed. Eventually the spiral was removed too. I don't recall now which took place first. We substituted other means of trying to accomplish our objective.

Q. While the spider and spiral remained in, were you, or not, able to make the apparatus of Fig. 2 of the patent in suit operate to produce blocks of snow as it had been intended?

A. No, it would not produce; that is,—I talked too fast; I mean we did produce snow in there, but we were unable to get it out in the condition in which the machine was intended to produce it.

Q. You produced snow in there,—meaning where, in the upper chamber, the lower chamber, or both?

A. There was some produced in the lower chamber, but the connecting member is what clogged off.

Q. If the snow was produced in the apparatus, and some of it went to the lower chamber, what prevented you, [475] Mr. Cole, from pressing that snow into blocks?

A. We were never able to get enough in there to even cool the machine down to the point where we would have a solid at the end of the compression stroke, without using some ultimate means to get the product down.

Q. To remedy these difficulties what did you and Mr. McLaren do?

A. We tried various schemes. We used a cutter on the shaft to replace the spiral member.

Q. What was the form of that cutter, Mr. Cole?

A. As I recall it, it conformed fairly well to the shape of the upper or expansion chamber.

(Testimony of Harry W. Cole)

Q. You used that with what result?

A. It bent and broke several times, and ultimately, when we made one that was rigid enough to stand the gaff, it bent the shaft at the bottom, because it was taking the thrust entirely on one side, and eventually broke the shaft. So, following that, we tried a counter-balanced shaft with two blades, one on each side. That worked better, but we still had some trouble with it. We tried at one time to put propellers on there, a series of them, one above the other, of different sizes.

Q. What did you eventually use in the upper chamber of the apparatus of Fig. 2?

A. Ultimately we changed the design of the upper chamber. We did a lot of experimenting, along in December [476] and January, 1926 and 1927, and we built different models of snow chambers. They were constructed of metal; something with a handle on the top, that we turned, and got different kinds of cutting devices to operate it. It was a sort of glorified and oversized coffee grinding arrangement. We would produce carbon dioxide snow, packed in there in different forms, and try to dislodge it. Out of that series of experiments we concluded that what we should have was an upper tank that was, if anything, larger at the bottom than it was at the top, so that the tendency was that it would clear itself much more easily, and that the shape of it should be elliptical, with two cutters on two separate shafts in there, disposed at 90 degrees angle, so we could shear; [477] then, as the snow would build up on the sides it would shear it off and drop it down in the form of fairly small pieces, so it would distribute itself well in the bottom chamber for pressing.

(Testimony of Harry W. Cole)

Q. Did you tell me that the shaft for operating the cutters was broken at some time during your experiments or not? A. Yes; we have had several shafts broken.

Q. After that what did you do; did you operate without a cutter or the scraper?

A. Yes. Yes; we did. In fact, we got quite some production out of the machine before we finally worked out the better type of cutters to clear the upper chamber. We used to use a bent bar, and by retracting the opening head we could go up there and poke in and loosen it up. We also had the top of the shaft where it was brought out, we had a plate made with a couple of bolts to hold that in as a plug in the top so the stuff would not blow out of the top of the chamber, and by removing that we used to get a long slice bar and go down and slice it off on the sides. We could keep pretty clear. It was not a workmanship job and it would not work the way we intended it to, but as long as you kept active enough, we could keep the stuff coming through.

Q. Then were you able to get delivered into the pressing chamber a sufficient amount of CO₂ to make a block of the size desired? [478]

A. Oh, yes; we did. In the beginning we had some trouble there, when we were fooling around with the different cutters, getting enough down there to do it, and we had to open up that head and poke in there to get the stuff down. So many times we would scoop it out and pile it up on the floor until we had enough, and then throw it back in and compress it.

(Testimony of Harry W. Cole)

Q. Did you have any compressed gases at any time in the blocks so formed during your experiments with apparatus of the form of Fig. 2 of the patent in suit?

A. Yes; we have had the blocks come out of there and blow up in our face. We had one explosion there when the fellow was distributing the payrolls and we picked up dimes and pennies off from the structural steel on the top of the building for weeks. After that—

Mr. Foster: I am late with my objection, your Honor, but I didn't want to interrupt the witness. I object to the question and move to strike it and the answer on the ground it is indefinite as to time.

Mr. Morris: It was during the time—

The Court: Make it definite as to the time when this happened.

Q. By Mr. Morris: Will you fix the time?

A. Well, I can't fix it specifically. I would say it was during that period between November of '26 and May of '27.

The Court: We will take our morning recess at this time. [479]

A. That is 18 or 19 years ago. It is a little bit hard to fix some of these *parts*.

The Court: I think that is sufficiently definite for counsel.

(Short recess.)

The Court: Proceed.

Q. By Mr. Morris: What did you find was necessary in order to prevent compressing and imprisoning CO₂ gas

(Testimony of Harry W. Cole)

in the blocks of ice or snow pressed in your pressing chamber?

A. Well, we found that we had to get the pressure off the snow before we could compress it and make a stable block of it.

Q. And how did you accomplish that?

A. Well, we had had considerable difficulty, and one of our difficulties was this: That the entrained particles of snow would carry back into the blow-back line and they used to plug it up. And then we developed a pressure through all of the system from the point where it plugged up, and in order to overcome that, we decided to operate while solidifying, carrying a pressure in the solidifying chamber, the theory being that by adding to the pressure above atmosphere that we would decrease the volume of the gas being carried out, and we would get a corresponding reduction in the velocity of the gas leaving the chamber and we would reduce the amount of entrainment. We put in equipment to bring about that desired result. We found that we could operate [480] at about 20 pounds or 30 pounds back-pressure in there, and we very definitely reduced the amount of entrainment; and also, we ran into another difficulty and that was that we ran into the same difficulty there that we did when our blow-back line plugged up, that is, we were compressing our blocks under that 20 or 30 pounds pressure and they just were unstable.

Q. What do you mean by "unstable"?

A. Well, I mean you take them out and they would blow up, they would break apart, they would just disintegrate. There were gas pockets formed in there. Unless we held the pressure on them for a very long time and reduced the external pressure on them as soon as they

(Testimony of Harry W. Cole)

came out of the machine, they just would not stay a block any longer.

Q. When did you charge liquid into the solidifying chamber of apparatus No. 2 with respect to your pressing operations?

A. Well, as it was originally designed, we thought we had a machine there that could be continuously operated so that we could continue the solidification during the pressing period, and as long as we had no pressure, that is, negative pressure in the upper chamber, we could do that; but as soon as we began to operate with the pressure in the upper chamber, then we found that we had something in the lower chamber that we did not want. The result was that we had to lose the advantage of it as a continuous operation and solidify as a [481] part of the cycle and at a pre-determined and constant pressure. Then we had to stop our solidification and reduce the pressure on there at the time when we were pressing the blocks. I mean it was a vicious cycle; what was good for one was not good for the other and we could not get both conditions in there at the same time.

Q. By The Court: I suppose "negative pressure" is like some of our Latin phrases, just a fancy word for suction?

A. Well, I really didn't mean that. I meant at approximate atmosphere. Negative pressure really does mean a vacuum, and that is not what I meant. I meant an absence of pressure.

The Court: An absence of pressure.

Q. By Mr. Morris: Through what ranges of pressure did you experiment during the period in question?

A. We operated all the way from zero pressure up to 30 pounds.

(Testimony of Harry W. Cole)

Q. Zero gauge? A. Zero gauge to 30 pounds.

Q. Up to 30 pounds. Did you eventually succeed in making the apparatus operate?

A. Yes. As an intermittent operating machine, it worked and produced very good blocks. We discovered this: That in playing with those pressures—we didn't know why at the time, but we did find this—that as we raised the pressure, we found that the product that was produced and that we were [482] able to press made a much nicer block, much better texture, had better structural strength, and less tendency for it to have a soft top.

Q. By The Court: That is, as you raised the pressure during the formation?

A. During the formation. I have been told since why that was, but at the time when we did it we didn't recognize it.

Q. By Mr. Morris: Mr. Cole, this was carried on during the time you were where, employed where?

A. I was employed at the time by the General Carbonic Company, Long Island City.

Q. Is that the company to which Dr. Jones referred in his testimony as the other plant producing carbonic or CO₂ ice or solid?

A. No. I think he referred to the Carbice Corporation in this connection, and the Carbice Company or Corporation was merely a customer of General Carbonic Company.

Q. Very good. Were any solidification operations of CO₂ carried on in the plant of the General Carbonic while you were there?

A. Do you mean other than the one I have just mentioned?

(Testimony of Harry W. Cole)

Q. Other than the one you have mentioned.

A. Yes. Dry Ice Company came in there as a customer in May, 1925 and they remained there until late in September of 1926. [483]

Q. Mr. Cole, what was the business of General Carbonic other than the operation, customer operation to which you have referred? What did they do? What did they make?

A. Well, their main product was the production and liquefaction of carbon dioxide for use in beverage, refrigeration and other commercial trades.

Q. You say "main product". Did they have any other product?

A. Yes. We were manufacturing fire extinguishers, Fire-Freeze fire extinguishers. We used to make headers and equipment for the use in connection with the carbonation of beverages.

Q. What apparatus did Dry Ice Company have in your plant for making solid CO₂?

A. When they first came in there, for a matter of a few days the product was made in burlap bags, the same as you saw it made here in the courtroom a few days ago.

Q. By The Court: They just came there to use the source of supply?

A. That is it exactly. And that was put into molds, it was hand-tamped, and then pressed in a little hand-operated press. That was only a matter of a few days until their snow tanks came and they were installed and operated during the entire period of their stay with the General Carbonic Company.

(Testimony of Harry W. Cole)

Q. By Mr. Morris: Wherein, if at all, did the snow tanks [484] operated by the Dry Ice Company during that period differ from the snow tanks described by Dr. Jones as being in the plants of the Dry Ice Company?

A. They were precisely the same snow tanks; and I think Dr. Jones has adequately described their construction and their operation.

Q. By The Court: To complete the record, have you been in the courtroom during the entire progress of this trial?

A. Yes; I have.

Q. You have heard all of Dr. Jones' testimony?

A. I have heard all of it; yes.

Q. By Mr. Morris: How did you come to consider making an apparatus of the kind illustrated in Fig. 5 or 2,—and 2 of your patent in suit?

A. Well, it was merely this: That we felt that, with the losses being incurred in the production of solid as it was then being made, it was an uneconomic method; that the industry never could grow to any definite size. We didn't think that the Dry Ice Company would ultimately succeed. We didn't think any manufacturer of liquid could support such an industry. The amount produced, as I remember—at the time, there was some altercation with regard to the bills, because there were times that the production of ice as against the amount of liquid gas supplied to the Dry Ice Company was on the basis of about 1 to 3. In other words, we were producing in that plant around 1100 pounds an hour of [485] liquid and that is what we would deliver into cylinders when we were filling cylinders, and when the Dry Ice was on the line, why, the production was pretty uniformly around 300 pounds an hour; and I don't think at any time when they were

(Testimony of Harry W. Cole)

there did they ever get to the point when the actual ice produced as against the amount of liquid sold to them amounted to more than 40 percent of the amount of liquid. And it was our feeling that something could be worked out that would be more economic. Even as they went along in the summer of 1925, I have seen the hand-tamped and pressed blocks, as pressed in the atmosphere, that would not be stable; that would blow up. In other words, they had to be careful and not try to compact them too much; there were limits there to which they could compact them.

Q. Were you familiar, Mr. Cole, with the sublimation losses from the time the manhole in the tank, the snow tank, was opened until the snow had been compressed into a block? A. Yes.

Q. By The Court: Who was McLaren? The record does not show that. You say "we" and apparently you mean you and Mr. McLaren?

A. That is right. Mr. McLaren at that time was the superintendent of the Long Island City plant of the General Carbonic Company.

Q. You were working, however, where?

A. Well, my work was all over. I was manager of plants [486] and had nine plants, of which the Long Island plant was one.

Q. Yes. And when you were conducting these experiments where were you working?

A. The experiments were conducted at Long Island City. Is that—

Q. Yes; that is what I thought. They were done at Long Island City and Mr. McLaren was there?

A. Mr. McLaren was there all the time, but I circulated among the eight or nine different plants that we had

(Testimony of Harry W. Cole)

at that time, although New York was my headquarters and the bulk of my time was spent there at Long Island.

The Court: Yes.

Q. By Mr. Morris: You were familiar with the tamping operation? A. Yes, sir.

Q. In the snow tank operation? A. Yes, sir.

Q. Who was in charge of that dry ice operation, solidification operation in the plant of General Carbonic?

A. Who was in charge of the dry ice operation, you say?

Q. In the dry ice or the solidification operation in the plant of the General Carbonic.

A. My friend, Mr. Martin, and, I believe, Mr. Hood was his superintendent at that time.

Q. What use, if any, were you able to make in connection with the apparatus of Fig. 5 of the patent in suit of your [487] experiments with the apparatus of Fig. 2 that resulted in Fig. 2 of the patent in suit?

The Witness: Will you read the last part of that question?

The Court: I do not believe that question is clear. Will you reframe it, please?

Mr. Morris: May I withdraw it and simplify it?

Q. When you first conceived of the apparatus of Fig. 5 of the patent in suit did you know at all that satisfactory blocks of ice could be produced therein without tamping?

A. No; we did not.

Q. Did you have any screen in the apparatus of Fig. 5 of the patent in suit?

A. No; there was no screen. We had a substitute for a screen.

(Testimony of Harry W. Cole)

Q. That substitute was what?

A. We had a series of holes or apertures which were around the upper perimeter of the upper chamber, our theory being that, with the snow tank and with the screen across the top and the velocity of the gas going up through there, had a tendency to smaller particles, would pack on that screen until it would plug it off; and we felt that in this particular design, that by putting the outlet for the gas on the side we would change the direction in which the gas would be going out, the entrained particles would impinge against the upper platen in their and either have a tendency [488] to stick or to drop down rather than to be carried around the turn and through these small openings.

Q. Small openings, how large were they, Mr. Cole?

A. Well, my recollection is those holes were probably maybe three-quarters of an inch in diameter. That is pretty hazy in my mind now.

Q. Very well. Then, did they function as a screen or function to divide the outflow currents?

A. Well, they didn't function as a screen. They were intended as a substitution for the screen, to allow the escape of the unsolidified gas without carrying as much of the entrained gas away.

Q. Very well. A. I am merely—

The Court: What Mr. Morris means is: Were they designed to accomplish the same result as the screen, in a different way?

A. Yes; they were intended to accomplish the same result and, at the same time, be an improvement over the screen.

Q. What you were doing, you were using currents, changing the direction of flow so as to permit of it impinging on the shell? A. That is right.

(Testimony of Harry W. Cole)

Q. Of these particles, and let the gases pass out?

A. That is right; and providing a chamber in there for the collection of what did go over so they wouldn't get into [489] the blow-back line and plug it up.

Q. And then, how did you do that? That is what I was wondering.

A. Well, this was a double-jacketed chamber with the outlets fairly close to the bottom, where the gas escaped from the outer shell. One of the things, one of our mental hazards, we didn't know whether it would work or whether it would not.

Q. By Mr. Morris: And it did?

A. Well, it did ultimately. When we first built that machine, that was in 1928, we had been through the bulk of our experiments with the horizontal type of machine and had a knowledge at that period that we did not have in 1926 when we first started to play with the horizontal machine.

Q. Did you know when you first conceived of this machine whether it could be safely operated or not?

A. No. I will tell you very frankly we had misgivings with respect to it. The state of the industry at that time—

Q. We are speaking solely of Fig. 5, are we, Mr. Cole?

A. I understood your question was directed at that.

Q. That is correct.

A. Back at 1926 and for a period there, the Interstate Commerce Commission regulation would not allow handling more than 50 pounds of liquefied gas in a single container and ship it, with the exception of a few that were used in the lighthouse service for government purposes. In the lique- [490] faction plants we kept our

(Testimony of Harry W. Cole)

liquid receivers, as much as we could, down to the point where there was not more than 50 or 100 pounds of liquid in any one container. We did that as a measure of safety, because of the fact that if you double the quantity of liquid and something blows, why, your disaster will be twice as great, and with the machine such as we had conceived of, the vertical type machine, we would be running into big volumes there.

Q. How much liquid would be required to charge to make a 20x20x10-inch block, on the average?

A. Well, the amount of liquid utilized in producing a 200 block solid CO₂ will be in the neighborhood, probably, of 500 pounds, depending on the efficiency.

Q. That is, with the single pass, as Dr. Jones referred to, you have to put through 500 pounds, approximately 500 pounds to get a 200 block of ice or snow?

A. Yes.

The Court: I don't think you have answered Mr. Morris' question. The Interstate Commerce Commission regulation as to shipment and the size of the storage tank in which you kept it, whatever you might call it, was not the thing. What he asked you was with regard to the machine itself. Did you have misgivings with regard to what was going to happen during these theoretic operations?

A. We did. We had misgivings, and I just threw that in there to indicate where the mental hazard came from as to— [491]

Q. That you were monkeying with a dangerous product? A. That is right.

(Testimony of Harry W. Cole)

Q. By Mr. Morris: Did you know, of your own knowledge, of any explosions of snow tanks or not?

A. No; I never knew of any that ever exploded. I have seen the blow-back lines get plugged up so that they have leaked at the gasket, so that the operator has considered it essential to loosen the holding mechanism on that door enough to allow some escapement to relieve it. [492]

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Mr. Foster: I think Dr. Jones has testified that there were commercially-operated devices like his charts, Exhibit 7.

The Court: That is what I am referring to.

Mr. Foster: Yes. And I think that I would be willing to stipulate on behalf of my defendant that that is true.

Mr. Morris: That what is true?

Mr. Foster: What I have just stated.

Mr. Morris: Will you read the statement of Mr. Foster, [493] please?

(Statement read by the reporter.)

The Court: May that be stipulated?

Mr. Foster: Yes, sir.

Mr. Miketta: I concur in that stipulation, if I may, your Honor.

The Court: Very well. [494]

Q. By Mr. Morris: You are an officer and director of the International Carbonic Engineering Company, one of the plaintiffs in this suit?

A. The Engineering Company?

Q. The Engineering Company. A. Yes.

Q. You have been such director for how long?

A. I have been a director of the Engineering Company since, I think, about 1932. I have been vice-president of

(Testimony of Harry W. Cole)

the Engineering Company,—one of the vice-presidents, since about two months back.

Q. The patent application in suit was transferred by you and Mr. McLaren to Carbonic Equipment Corporation, or Company, whichever it was, was it not?

A. That's right.

Q. And then that company sold that patent, or patent application, to the International Carbonic Engineering Company; is that correct?

A. To the Carbonic Equipment Corporation. It was acquired by a purchase of stock by the Engineering Company.

Q. My question was whether the Carbonic Equipment Corporation did not assign the patent application to the International Carbonic Engineering Company.

A. They did assign it, yes.

Q. Were you familiar with the licenses of the patent in suit? [495] A. Yes, sir.

Q. I hand you this paper, and ask you what it is.

A. Just a minute. He hasn't qualified me as yet as an officer of the International Carbonic, Inc. Shouldn't that be done by the plaintiffs?

Mr. Miketta: Pardon me, your Honor. May I look at the document?

Q. By Mr. Morris: Mr. Lyon reminds me that I have not asked you if you are an officer, other than a director, of the plaintiff, International Carbonic Engineering Company.

A. Yes, I have been a director of International Carbonic Engineering Company, Inc., and its predecessor corporation, bearing the same name, since early in 1936, and I have been a vice-president of International Carbonic, Inc., since about August of 1936.

(Testimony of Harry W. Cole)

Q. And vice-president of International Carbonic Engineering, how long? A. Only two months.

[496]

* * * * *

Q. Mr. Cole, do you as an officer of the plaintiff companies know whether or not they have licensees?

A. Yes; I do.

Q. Can you name those licensees?

A. I believe I can.

Q. Will you?

A. There is the Mathieson Alkali Company, the Michigan Alkali Company—I think that name may have changed to Wyandotte Chemical Company recently, the Liquid Carbonic Corporation, Pure Carbonic, Incorporated, the Pittsburgh Plate Glass Company, the Wabash Portland Cement Company, and Carribean Carbonic Company.

Q. Corporation? A. I am not certain.

Q. Mathieson is sometimes referred to as Mathieson Alkali Works, Inc.?

A. I believe so. I may not have used just the correct terminology there.

Q. Have you been in the plant of the Michigan Alkali Company and do you know what apparatus is used by it?

A. Yes, sir.

Q. Will you describe the apparatus that is used by that company? [517] A. They are using—

The Court: You can describe it by reference, if you want to.

Q. By Mr. Morris: Does it correspond with Fig. 5 of the patent in suit.

A. I would say so; yes, sir. [518]

(Testimony of Harry W. Cole)

* * * * *

Q. By the Court: Is this Fig. 5 an approximate description of the machines that you saw in the Wyandotte, Michigan plant of the Alkali Company?

A. I think I answered that, your Honor.

The Court: All right. Go ahead.

Q. By Mr. Morris: Have you been in plants of other [519] licensees? A. Yes.

Q. What was the type of CO₂ solidifying and pressing apparatus used in those plants?

A. They were all of the same type.

Q. Corresponding to Fig. 5 of the patent in suit?

A. All correspond with Fig. 5.

Q. Do you know the type of machine that the Pittsburgh Plate Glass Company has?

A. Yes. I know that from the company records. I know that that press was manufactured by the Baldwin-Southworth Company, and that information has come to me from my contacts with the licensee and the Baldwin firm who—the Worthington Pump Machinery Company who collaborated with them in the building of that plant.

Q. But the information has come to you as an officer of the company? A. Yes.

Q. Of the plaintiff companies? A. Yes, sir.

Q. What type of machine is being used by the Pittsburgh Plate Glass Company?

Mr. Foster: Objected to as calling for hearsay.

Mr. Morris: I submit that it is not hearsay. It is report made by the company and by his information received at the time the machine was being built. He tells

(Testimony of Harry W. Cole)

you the type [520] of machine it is. It was made by Baldwin.

Q. Does that give you enough information to enable you to know the type of machine being used by the Pittsburgh Plate Glass Company?

A. It does, because they have only made one type of press. The only change that they have made since the original design which was drawn from blueprints that were furnished to them prior to the time that we applied for the patent, there have been minor changes in hydraulic arrangement and a slight variation in the walls of the press chamber.

Q. Is the machine so used by Pittsburgh Plate Glass Company of the type of Fig. 5 of the patent in suit?

A. Yes, sir.

Q. How many machines operated by Pittsburgh Plate Glass? A. One.

Q. The Wabash Portland Cement Company apparatus, how many machines? A. They have one.

Q. Have you information with respect to that or have you seen it?

A. No; I have not seen it, but that—

Q. As an officer of the company and the information that you have received as an officer of the plaintiff companies, do you know the make of that machine and its type?

A. Yes. It was manufactured by the Baldwin Company for them. [521]

Q. And the type corresponds with Fig. 5 of the patent in suit? A. Yes, sir.

Mr. Foster: Objected to as calling for hearsay, no foundation laid.

(Testimony of Harry W. Cole)

The Court: Well, I think it does that way.

Q. You know that the Baldwin people sold them one machine and they only have one, do you?

A. That is right.[522]

* * * * *

Q. By Mr. Morris: Have you been in any of the Mathieson plants?

A. No; I haven't been in the Mathieson plants.

Q. Take Liquid, have you been in several of those plants? A. Yes; I have.

Q. Can you tell me which plants of Liquid that you have visited? A. Yes, sir.

Q. Will you?

A. Long Island plants, located at Long Island City; Boston, Massachusetts, Buffalo, New York; Chicago, Illinois; Pittsburgh, Pennsylvania; Philadelphia, Pennsylvania; Seattle, Washington; San Francisco, California; Los Angeles, California; Albany, New York.

The Court: Chicago?

A. Yes; Chicago, Illinois. I thought I mentioned that.

The Court: I guess maybe you did. I was not sure. Long Island City?

A. Long Island City, that is the first one I mentioned.

The Court: Yes.

Q. By Mr. Morris: Did you see the apparatus of the carbon [524] dioxide solidifying and press apparatus used by your licensee, Liquid, in those several plants?

A. Yes, sir; I have.

Q. Will you tell me whether the apparatus that you saw in those several plants had the elements as shown by

(Testimony of Harry W. Cole)

Fig. 5 of the patent in suit and were adapted and were used as shown in Plaintiffs' Exhibit 7 in this case?

Mr. Foster: That is objected to as a compound question, presuming facts not in evidence, presuming that the operation of Fig. 5 and Exhibit 7 are the same.

The Court: Read it, please.

(Question read by the reporter.)

The Court: Objection overruled. I understand you are entirely familiar with 7 and you were here during the testimony?

A. Yes. Of course, 7 has a lot of optional bases of operation, and my answer to that would not necessarily refer to any specific—

Q. By Mr. Morris: I show you a copy of Fig. 7 and ask you—

A. I have it right in front of me here. I have the Fig. 7 here.

The Court: Well, eliminating the order of optional bases, were they operated in that manner?

A. Yes. You see, these different plants have different operating conditions, maybe, from the solidification equipment itself. Some have low-pressure sources, some don't, [525] and there are various way of handling it, all of which I think Dr. Jones has covered in his various ways, as he has illustrated in reference to this Exhibit 7 in here. But I mean all of those ways would not be used in any one operation. I just want to be sure that I am understood in answering it.

Q. By Mr. Morris: I withdraw the question, and ask you as to whether those machines that you saw or the apparatus that you saw in the several plants of Liquid

(Testimony of Harry W. Cole)

Carbonic Company that you have mentioned had the elements shown in Fig. 5 of the patent in suit?

A. Yes.

Q. How did those several machines function in operation; did they operate, all or some of them, in conformity with the operation shown in the first nine figures of Plaintiffs' Exhibit 7 in this case?

A. Yes; they would correspond to—I think I had better refer to that now. I will have to qualify that answer if I make it, for the reason that I explained a minute ago. These references refer to, in the handling of the exhaust gases from the solidification chamber, high-pressure and low-pressure sources. There have been various methods developed for handling that, and not always the same; and I mean I can't say that there was always a high-pressure and a low-pressure source to these. There either was that or there was some instrumentality in there which gave the effect of a high-pressure and a low-pressure condition in the system. [526] Now, I just don't want to be caught up on how literally this Exhibit 7 is being interpreted.

Q. All right; let us come to that. You are familiar with Fig. 1 of the patent in suit? A. Yes.

Q. Does or does not that show apparatus for operating the machine or structure at high pressure and low pressure? A. Yes; it shows both.

Q. Do the structures which you referred to as having seen in the plants of Liquid have apparatus to enable those structures to operate at certain stages of the cycle at high pressure and others at low pressure?

A. That is right; they do.

Mr. Miketta: Objected to, your Honor, as being highly indefinite. Are you referring to the pressure

(Testimony of Harry W. Cole)

within the chamber at a given period? I don't know whether the witness understands it, but I do not.

The Court: Will you read the question?

(Question read by the reporter.)

The Court: You mean at times at low pressures, or other stages of the cycle at low pressures?

Mr. Morris: That is right.

The Court: You may answer.

Mr. Foster: Objected to, if the court please, on the further ground it is indefinite in the use of the terms "high and low pressures." [527]

The Court: Oh, well, I think that is a matter of common knowledge. You may bring that out on cross examination. I don't think there will be any confusion there. You may answer.

A. The answer is "Yes."

Q. By Mr. Morris: Have you seen any plants of your licensees other than those which you have now testified to? Have you visited or seen the apparatus in any other plants of any of your licensees?

A. Have we referred to Michigan Alkali Company's plant?

The Court: Wyandotte. A. The Wyandotte.

Q. By Mr. Morris: You said you had been in that, as I recall it? A. Yes.

The Court: You testified you saw those and those were Fig. 5 or like it? A. Yes.

Q. By Mr. Morris: You did testify as to that?

A. No; that covers all of the plants that I have personally been in, to the best of my memory at the moment.

(Testimony of Harry W. Cole)

Q. To clear it up about Michigan, my recollection is that you did testify that you had gone in and inspected the apparatus in the Michigan plant at Wyandotte?

A. Yes. If I did not testify to it, I will do so now. I have been in the plant and inspected the original records [528] showing the purchase orders, where they were originally purchased, and I have here a list of the dates that were taken off of that as to when they were purchased.

Q. Did those structures that you saw in the Michigan plant have the elements and function as does the apparatus of Fig. 5 of the patent in suit?

A. Yes.

Mr. Morris: That closes, if your Honor please, my desire to enter proof upon that. Now, other than "Inc." as a plaintiff, I want to show its relationship to Engineering Company and also that it is the licensing agent or exclusive licensee of Engineering Company.

Q. Do you know who owns the capital stock of the plaintiff International Carbonic, Inc.?

A. Yes. [529]

Q. By whom was it owned?

A. It was owned by Carbonic Engineering Company.

Q. All of it? A. 100 per cent.

Q. Incidentally, do you, directly or indirectly, own any capital stock in International Carbonic Engineering Company?

A. Directly, no.

Q. Do you or your family own any of the capital stock of another company which owns some of it?

A. Part of it.

Q. The name of that other company is what?

A. Metropolitan Carbonic.

(Testimony of Harry W. Cole)

Q. That is, own what percentage of the capital stock of the International Carbonic Engineering Company?

A. 25 per cent of the common stock. [530]

* * * * * * * *

Cross-Examination

Q. By Mr. Foster: Mr. Cole, you mentioned that you or your family owned some interest in the Metropolitan Carbonic Company? A. That's right.

Q. How much interest? A. About 30 percent.

Q. That company owns 25 percent of the common stock of which one of the plaintiffs?

A. International Carbonic Engineering Company, the parent corporation.

Q. Do you own any of the stock, or does your family, of the other plaintiff, International Carbonic, Inc.?

A. I do not quite understand your question.

Q. The question is simply this: Does Metropolitan Carbonic Company, or you, or your family, own any interest in the other plaintiff?

A. No, all the stock of that company is owned by the parent company.

Q. Do you receive a salary from either one of the plaintiffs? A. Yes.

Q. From both of them? A. From one.

Q. Do you have any other financial interest in the outcome of this litigation? [537]

A. None that hasn't already been mentioned.

Q. You testified that after December, 1930, as I recall, you had no connection for some years with the solid CO₂ industry, is that correct?

A. That is correct.

(Testimony of Harry W. Cole)

Q. When was your next connection with the solid carbon dioxide industry?

A. I have never been connected with it since, only through these plaintiff corporations.

Q. Wasn't the Metropolitan Carbonic Company active in the field of solid carbon dioxide after December, 1930, Mr. Cole?

A. No, it never was active.

Q. Weren't you, after December, 1930, associated with Mr. George Petty in a business venture?

A. Yes; and I still am.

Q. Did not some of those business ventures relate to the field of solid carbon dioxide production or sale?

A. Not in connection with the production.

Q. These business ventures did relate to the sale of solid carbon dioxide?

A. Yes.

Q. Another associate was Mr. Bronstein, is that correct?

A. No.

Q. Were you never associated with Mr. Bronstein after December, 1930? [538]

A. No.

Q. Your activities with regard to the sale of solid carbon dioxide covered what period from December, 1930, to date?

A. I was associated with the Carbonic Gas and Service Corporation from about May, 1931, until December, 1934. I was associated with Chemical Gases, Incorporated, from around the middle of 1935 until about August of 1936. That is all.

Q. What business is conducted by the International Carbonic Engineering Company other than licensing others?

A. I don't think they have ever had any other business: no business of any remunerative characteristic, whatsoever.

(Testimony of Harry W. Cole)

Q. All of the licenses that plaintiff, International Carbonic Engineering Company, has issued, do they all relate to the field of carbon dioxide?

A. I believe they do, all of them.

Q. Can you tell me how many United States Letters Patent the plaintiff, International Carbonic Engineering Company, owns title to, or licensing rights under?

A. I couldn't tell you exactly, no.

Q. Approximately?

A. I presume seven or eight.

Q. Seven or eight? A. Seven or eight.

Q. My question contemplates, Mr. Cole, the number of [539] United States patents that the plaintiff, International Carbonic Engineering Company, either owns title to or licensing rights under. Did you understand the previous question to be that?

A. No, I didn't understand that.

Q. Now, will you answer it with that understanding?

A. The question is, how many patents does International Carbonic Engineering Company either own or have rights under?

Q. Licensing rights under.

A. I don't recall of any licensing rights that they have. There may be seven or eight patents that the company owns outright, and they have a part interest in a number of other patents. Just how many, I couldn't say. Some of them are in the field of production; some of them are in the field of use patents.

Q. Can you state approximately how many United States patents plaintiff Carbonic, Inc., has title to, or licensing rights under?

A. I should say in the production field about somewhere in the neighborhood of 40 of those licenses.

(Testimony of Harry W. Cole)

Q. By production field, you mean production of solid CO₂, is that correct, Mr. Cole?

A. Yes. We don't have much of anything but the solid field covered.

Q. Has either one of plaintiffs, to your knowledge, ever granted a license under only the patent in suit to anyone? [540]

A. No, I don't think they have.

Q. You have stated that you are familiar with the patent in suit. I presume that you were familiar with the application for the patent in suit, while it was being prepared, and when it was filed?

A. Yes.

Q. And with the drawings and specification of that application?

A. That's right. I helped prepare them. [541]

* * * * *

Q. By Mr. Foster: I understand the first conception of yourself and Mr. McLaren on the subject matter of the patent in suit was in the late summer of 1925, you stated?

A. That's right.

Q. Can you give me the month, please, Mr. Cole? Permit me to modify that last question; I don't want to mislead you. I believe your testimony was, on direct examination, that the conception of the patent in suit was in the late summer of 1925; is that a fact?

A. Yes. Our real discussions with regard to this development were picked up immediately following about the 4th of July. I think we were having a terrific amount of difficulty in that particular period with our relationship with the Dry Ice Company, due to the fact that there was a [542] lot of hot weather, and they were in difficulty not in getting enough of the product and the volume of gas they were using, and the amount of ice produced was very, very small, and that situation was

(Testimony of Harry W. Cole)

really the thing that impelled us at that particular time to begin to think about what could be done to obviate these sort of difficulties. Just when it happened I don't know; whether it was in the month of July, or in the month of August. You see, at that particular time we were building a liquid plant in Chicago, and at that time we did considerable traveling back and forth, and we spent some time in Chicago together, and it was during that period we made our first conception.

Q. You say you spent some considerable time together. Do you mean yourself and Mr. McLaren?

A. That's right.

Q. During that time, by that phrase you meant during July and August of 1925? A. That's right.

Q. And it was during July or August, some time in 1925, that this conception of the device illustrated in Fig. 5 of the patent in suit occurred? A. That's right.

Q. Prior to that time the Dry Ice Company had come into the plant of your company, and started this development work in connection with the snow tank?

A. No, any development they had in connection with [543] the snow tank evidently was behind that, because they came there with producing equipment, which was utilized right through that entire period they were with us.

Q. That was early in May, 1925, that the Dry Ice Company came in with that equipment?

A. That's right.

Q. That equipment included the snow tank, as I understand you? A. Yes.

Q. And it included a press for compressing the carbon dioxide snow made in the tank, into blocks?

A. Yes.

(Testimony of Harry W. Cole)

Q. You observed that operation of this snow tank, and this press, did you, immediately after it was brought into your plant? A. Yes.

Q. Was it part of your duty to be familiar with their operation?

A. Not necessarily in connection with their operation; only so far as it affected our operations.

Q. Did you assist them in these operations?

A. I don't recall that we ever did assist them, other than as you would help out customers, who you thought some time might be a good customer.

Q. I presume as these representatives of the Dry Ice Company commenced work with this equipment, in May, 1925, [544] and you observed it, you from time to time made suggestions about its operation?

A. We did make some suggestions.

Q. To whom are you referring by "we"?

A. Mr. McLaren and myself.

Q. After the 1st of May, 1925, and prior to July, 1925, what suggestions did you or Mr. McLaren make?

A. I wouldn't recall exactly.

Q. Did Mr. McLaren, with you, observe the operations of this snow tank prior to July, 1925, in which liquid carbon dioxide was introduced directly into the snow chamber? A. Yes.

Q. And did Mr. McLaren, with you, prior to 1925, observe the operations of this snow tank in which carbon dioxide in gaseous form was withdrawn from the snow chamber? A. No.

Q. Did you observe it? A. No.

Q. It was my understanding that the snow chamber of the Dry Ice Company included an outlet for the carbon

(Testimony of Harry W. Cole)

dioxide gas from the snow chamber. Did it include such an outlet? A. It surely did.

Q. And gas was discharged from the snow chamber of the dry ice device prior to July, 1925, through that outlet? [545] A. Prior to when, sir?

Q. July, 1925. A. Yes.

Q. And you observed that? A. Yes.

Q. Did Mr. McLaren also? A. Yes.

Q. During these operations of the snow tank of the Dry Ice Company, in your plant, prior to July, 1925, what was the maximum pressure in the operations you observed, upon the liquid carbon dioxide supplied to the snow chamber?

A. So far as the pressure of the liquid supplied to the chamber, it was around 1000 to 1200 pounds, all the way through the entire period that they were in there. I rather object, if I may, to this specific date being referred to in all of your questions, because there was an area in there; they were in there for more than a year, and it is pretty hard for me to go back a matter of 18 or 19 years, and try to say where I was on a certain date, or what happened on that particular date.

Q. I can appreciate that, Mr. Cole, and I ask only for your best recollection. To the best of your recollection, prior to July, 1925, how many snow chambers did the Dry Ice Company have in your plant?

A. That I don't remember directly. I believe they started in operation with one, and I think they eventually [546] had three operating over there. Just when they came in, I am not certain of.

Q. What did you observe as to the thickness of the metal from which that first snow chamber was made?

(Testimony of Harry W. Cole)

A. My recollection is that was made out of about a quarter of an inch of material. In fact, I think that has already been stated in here.

Q. Quarter-inch steel?

A. I think it would be steel, yes; light steel plate.

Q. During these operations of the Dry Ice snow rank, prior to July, 1925, what was the pressure upon the gas which was taken from the snow chamber?

A. That varied considerably. I think they intended the operations and the operators at that particular time to operate at negligible pressure. In other words, the line was directly open, and there was nothing but line resistance on it all the way back to the gas holder that floated on the end. It might have carried 3 or 4 inches of water pressure. It fluctuated by virtue of the fact that there was stoppage, or partial stoppage, in the line at various times, so it did not have continuity of pressure.

Q. These gas holders are invariably back of it?

A. That is correct.

Q. The maximum pressure that could be maintained in a line going to such gas holder would be very small?

A. That is correct.

Q. About how much? [547]

A. I don't know; it would be a matter of ounces, but I want you to remember I am not, and I don't pretend to be an expert. You can get me on a theory; you can get me on these technical matters. I have been out of the field of operations since 1930, and my memory isn't so good on detail.

Q. I don't mean to get you on anything. All I want you to tell us is your best recollection of things you observed, and this operation of the snow tank which you observed prior to July, 1925. The snow was removed

(Testimony of Harry W. Cole)

from the snow chamber and pressed in a mold, as I understood you?

A. That is true, and this same operation went on; there were no changes in the general method of operation from the time they got the snow tanks installed until they removed the snow tanks from the place, and took them away.

Q. These snow tanks you stated arrived a few days after, or a very few days after the representatives of the Dry Ice Company came to your plant, around the 1st of May, 1925?

A. That is my recollection.

Q. These tanks were put in commercial production of solid CO₂, weren't they?

A. Yes, they went into commercial production, as I recollect, just as soon they were installed, and put to use.

Q. There was no period of experimentation or development? [548]

A. No; in fact, in the interim period they were already, as I understand it, selling commercially, when they came in there.

Q. I think you testified that they had some difficulty with some of the blocks made by this Dry Ice machine being unstable to the point of exploding?

A. That is right.

Q. Did that occur prior to the time Mr. McLaren and you began work on your invention?

A. I wouldn't recall that exactly. I think it might have been.

Q. Don't you recall that it did, and for that reason you had in mind the necessity of keeping pressures low while you were developing your invention?

A. Well, the question of getting into the development of our invention, and that question of pressure control,

(Testimony of Harry W. Cole)

was a matter of later development in there. There was no date of conception back in there. That was an out-growth of our development back in 1926, after we had a machine to work with. We never claimed a conception date of the pressure control as early as we did the Figure 5 machine. [549]

Q. While we are on that point, what is the date that you state was the date of conception of pressure control in the pressing operation?

A. Well, I would say that was along in the winter of 1926-'27, probably.

Q. Can you fix it any better by reference to a month, Mr. Cole?

A. I don't think I can go that close. As I mentioned, within certain areas about what we did, but I can't get specific on those dates. My memory isn't that good. I might be able to dig up documentary evidence. We submitted documentary evidence in the interferences and at that time I was able to testify. I had documentary evidence in front of me. And I am just not that good.

Q. Now, during this operation, the first few days' operation of the dry ice machine in your plant that you observed, was the liquid carbon dioxide supplied to the snow chamber until a desired amount of solid carbon dioxide had been formed in the snow chamber and thereafter the liquid supply shut off?

A. My recollection is that that is the way it operated all the way through. I don't remember just whether the scales were there when they first began to operate, or whether the scales were brought in later as they were found necessary, but my—what I remember of it now is that those tanks were setting on the scales. That is the

(Testimony of Harry W. Cole)

impression [550] that is left after the wear and tear of the years.

Mr. Foster: May I, your Honor, ask the witness to attempt to speak just a little louder?

The Court: Yes. Speak up just a little louder. It is rather hard for me to hear you, too.

Q. By Mr. Foster: And in those operations with this dry ice snow chamber and snow press, the first few days' operation after it arrived in your plant, the snow which was formed in the snow chamber was placed finally in a press; that is correct, isn't it?

A. It was always placed in a press.

Q. And there it was subjected to compression by hydraulic action to form it into a block, is that correct?

A. Yes.

Q. And during that compression the mass of solid carbon dioxide was not completely enclosed, but, on the contrary, there were openings permitting the gas in the solid carbon dioxide to escape during pressing; that is true, isn't it?

A. Yes. I believe there was a floating block on top and bottom.

Q. And you understood during those operations that it was necessary for the gas to escape during the pressing operation to produce a stable block?

A. Yes. We used to see clouds of it going around the place.

Q. What caused this explosion of this block of solid [551] carbon dioxide made with the dry ice apparatus, if it were compressed in this chamber so that gas could escape during the pressing operation?

A. Well, you would have an entrainment of air in there as well as carbonic gas, and that might have had

(Testimony of Harry W. Cole)

something to do with it. But I know you can press carbon dioxide out in the open and you can press it with sufficient rapidity and at high enough pressure, and you will find that your block won't stay a block afterwards. I am not sure but what some of the impurities that may have been in the carbonic gas used might have had something to do with that. I think—and this is more or less hearsay—they tell me that this product varies in different plants, and they can't always operate one just as they operate another, because the characteristics of the liquid may be a little different.

Q. This knowledge that you have stated in your last answer, so far as that answer stated knowledge, you had when you observed these operations of the dry ice equipment there shortly after it was brought in in May, 1925, didn't you?

A. I don't know that I did. You know, it is awfully hard, 18 years later, when probably 90 percent of your knowledge has been picked up since that earlier date, to try to straighten out in your mind what you knew back there and what you didn't know back in that particular time. I can't say whether certain knowledge that I have today, whether I picked it up ten years ago or fifteen years ago or eighteen [552] years ago.

Q. You are unable to answer my question; that is your answer?

A. That is right.

Q. In these operations of the press which you have just described as occurring there in the dry ice press prior to July, 1925, did Mr. McLaren as well as yourself observe them in your company, or didn't he?

A. Sometimes in my company, sometimes probably alone.

(Testimony of Harry W. Cole)

Q. I neglected to ask you in that period of operation prior to July, 1925, what various pressures did you observe that the snow chamber was operated under during the formation of the solid carbon dioxide in the snow chamber?

A. I don't recall exactly. I know there was periods in there that they had pressures that were high. I have seen it leak so it was necessary to relieve the internal pressure by loosening the door. I think there was no effort made to determine exactly what the pressure was. I don't even recall that in the beginning there was a pressure gauge on those machines over there.

Q. You referred in your last answer to a high pressure. What was the highest pressure that you observed in that period during the time that liquid carbon dioxide was being introduced into the chamber?

A. Well, I just told you I am not sure of that. I don't recall at that period that there was a pressure gauge [553] or anything on there that would indicate what the pressure was.

Q. During the total period of your observation of that snow chamber what was the maximum pressure in it that you observed while liquid carbon dioxide was being introduced?

A. What was the maximum pressure?

Q. Yes.

A. I wouldn't recall what that maximum pressure was.

Q. Can you give an approximate value? Was it over 30 pounds?

A. I think it probably went above 30 pounds when they plugged up the blow-back line at times.

Q. It went to about 60 on those occasions, didn't it?

A. I don't know. I don't know what pressure that tank would stand.

(Testimony of Harry W. Cole)

Q. As I understand you, prior to the date of conception by you, first conception by you and Mr. McLaren of the subject matter of Fig. 5 of the patent in suit, you knew and Mr. McLaren knew from observation that solid carbon dioxide could be formed by discharging liquid carbon dioxide into an air-tight, gas-tight chamber and relieving the pressure thereon; that is true, isn't it?

A. Yes.

Q. And you knew that in order to perform that operation it was necessary to withdraw carbon dioxide in gaseous form from that gas-tight chamber?

A. Yes. [554-555]

Q. And you both knew that in such a manner you could form a solid carbon dioxide that could be compressed into blocks as a commercial commodity?

A. Yes.

Q. And you both knew that when you introduced liquid carbon dioxide into a gas-tight chamber and released the pressure thereon a part of the liquid carbon dioxide was converted into a solid and a part converted into a gas? A. Yes.

Q. And you both knew that in order to provide a stable, merchantable block product of solid carbon dioxide it was necessary to compress it in a press under such conditions that carbon dioxide gas contained in it could escape? A. Yes.

Q. And you both had seen operations embodying all of those principles, and all of that knowledge performed by others prior to the earliest date of conception of any of the subject matter of the patent in suit?

A. Yes. We saw practiced just what has been described by Dr. Jones on the stand here as the snow tank operation. That is exactly as it was and as it was

(Testimony of Harry W. Cole)

used in General Carbonic plant, as far as that would teach us anything; yes.

Q. And you both had prior to this earliest date of conception observed that when liquid carbon dioxide was delivered to a gas-tight chamber and the pressure on it relieved there would be formed solid carbon dioxide of such [556] density, such coherency, that it was necessary to use tools to carve it out of the snow chamber; that is true, isn't it?

A. Well, I think you—no. I will answer you no to that.

Q. Do you mean—

A. I can't go all the way with you on the question, that is all.

Q. Let us divide it. Prior to the time that you say you and Mr. McLaren first conceived of the subject matter of the patent in suit, you had observed operations of this dry ice snow chamber which involved the use of a shovel to dig the solid carbon dioxide out of that chamber, hadn't you?

A. Yes. I can perhaps describe the material that I saw taken from the snow chamber. This snow, as it forms, to say it is a light, fluffy snow—well, unless you throw it out on the floor you never see it as light, fluffy snow. If it is made in a chamber where it is impacted by the velocity of the stream of gas from which it is deposited, you never see it light and fluffy. Now, you will always see it packed into a tank or in a closed chamber you make it in. It is about the consistency of a dry snow, water snow, that has been blown by a gale. You have seen it pile up against a windbreak along the railroad track after you have had a lot of wind on it, that you can break it. It is in chunks that it will stay together

(Testimony of Harry W. Cole)

within reasonable reason, and you can step on it and it will almost hold your weight, but it will [557] let you go down. That is the type of stuff that I used to see taken out of there. It was purely a snow operation; it never was anything else but a snow operation. It had nothing of the characteristics that you might say an ice or snow formed at the higher range of pressures which is more like the type snow you see when you have had a thaw and it is frozen over night and you can stand on it. They never had any difficulty over there to get their product out of the side of a tank. It was either a small shovel or a scoop similar to what the groceryman used to use in shoveling his sugar into the paper bag. It was always so you could take it out.

Q. Have you finished your answer, Mr. Cole?

A. Yes.

Mr. Foster: I think I have finished this part of the subject matter of my cross examination. Does the court wish me to continue?

The Court: Yes; go right along, if you don't mind. I would rather stay a little while longer on it.

Q. By Mr. Foster: You have heard the explanation that has been given here by Dr. Jones as to the meaning of the triple point, I take it? A. Yes.

Q. Did you know about the triple point of carbon dioxide there in July of 1925?

A. I knew about the triple point long before that date. [558] I mean just as a matter of the subject it was studied in college. I had thermo dynamics and I almost broke my pick on that very point of the triple point of carbon dioxide. I knew about it.

(Testimony of Harry W. Cole)

Q. And you have heard the explanation here that if we discharge liquid carbon dioxide into a gas-tight closed chamber and relieve the pressure on it, but keep the pressure about 60 pounds, we will accumulate a body of liquid carbon dioxide in the gas-tight chamber so that if we subsequently bleed off the carbon dioxide gas there will be formed carbon dioxide ice in that chamber; you have heard that description? A. I have.

Q. Did you know that in July, 1925? A. No.

Q. You did not know that until considerably later, did you, Mr. Cole? A. No.

Q. When would you say you first knew that?

A. Oh, I think it was along about December, 1928.

Q. And did you learn that from Mr. McLaren?

A. No.

Q. From whom did you learn it?

A. I think probably Dr. Jones told me as much about it as anybody.

Q. You had in the period of 1928 and earlier discussions with Dr. Jones, I understand, with respect to the factors [559] involved in apparatus and methods for the formation of solid CO₂, is that right?

A. This is subsequent to 1928?

Q. Well, you had some such conferences and discussions in 1928, didn't you?

A. Well, just about during the month of December, perhaps, not earlier than that.

Q. And you had no such discussions with Dr. Jones in any earlier year? A. No.

(Testimony of Harry W. Cole)

Q. They commenced in December, 1928, and continued how long?

A. Well, I was with Dr. Jones off and on during that period until I left the Liquid Carbonic Company at the end of 1930.

Q. When this suggestion was made to you by Dr. Jones in December of 1928 with respect to the formation of carbon dioxide ice from a body of liquid carbon dioxide in a gas-tight chamber was Mr. McLaren present?

A. Yes; I believe he was.

Q. Can you tell us where that meeting or discussion took place?

A. It was over in the General Carbonic Company plant at Long Island City.

Q. And who was present besides the three you have mentioned? [560]

A. I am not just certain. I believe Mr. Brown of Liquid Carbonic, and Mr. Rust, who was then president of Dry Ice Company, may have been present. I am not just certain who was there.

Q. Can you state what Dr. Jones said at that time on that subject?

A. I remember one thing very distinctly; yes. He said that—his remark with reference to it was that it was a dual machine that had two—that could operate on the triple point as well as on snow, and it was the very thing he had been looking for.

Q. Now, you have—

Mr. L. S. Lyon: I think that is the exact statement which the defendants' counsel objected to when Dr. Jones was asked.

The Court: Then you have now got it in the record.

Mr. L. S. Lyon: That is right.

(Testimony of Harry W. Cole)

Mr. Foster: Are you objecting, Mr. Lyon?

Mr. L. S. Lyon: No.

Mr. Foster: I didn't understand the purpose.

Q. You have stated that in the late summer, July or August of 1925, you and Mr. McLaren first conceived the subject matter illustrated in Fig. 5 of your patent. When did you first conceive the subject matter illustrated in Figs. 1 and 2?

A. Well, the Fig. 2 machine grew out of a discussion that [561] we had over our first conception of the Fig. 5 machine, and it was shortly thereafter.

Q. Well, can you tell me the month?

A. Oh, it might have been the last of July or along in August sometime.

Q. July or August of—

A. One followed right directly behind the other. It was a matter of perhaps a few days or a few weeks.

Q. And when was the machine first completed and successfully operated, that is, operated to your complete satisfaction, which machine was identical with Fig. 5 of the patent in suit?

A. Well, I think we got our first drawings that we submitted for bids, were along in February of '28. The machine was ordered sometime shortly thereafter. The machine was delivered around the latter part of September in 1928, went into operation sometime along the latter part of November or first of December, 1928. That is Fig. 5.

Q. I beg your pardon?

A. That is Fig. 5 we are talking about.

(Testimony of Harry W. Cole)

Q. Yes. When did you first succeed in operating that apparatus to your satisfaction, Mr. Cole?

A. Well, that apparatus hit on all six the minute we turned the gas flames on it.

Q. When did you first operate to your satisfaction an apparatus like Figs. 1 and 2 of your patent? [562]

A. Now, I want to differentiate between this Fig. 1 and 2, because Fig. 1 has got a lot of stuff in it that Fig. 2 don't have, and it is not fair to ask me to make a reference to two different things and make an answer to them. Now, if you mean Fig. 2, then I can answer that better if you make it two questions instead of one.

Q. Doesn't Fig. 2 illustrate a part of the apparatus of Fig. 1? A. A part of it only.

Q. Did you ever successfully operate an apparatus such as is illustrated in Fig. 1 of this patent in suit?

A. Yes.

Q. When, first?

A. Well, that is something, again, that was not all—we didn't get a flash in the pan and see a picture of all this stuff. This grew out of a development over a period of time, and what we got on Fig. 1 here includes the outgrowth of the study and the period that went on, which started back in the summer of 1925, and it carried on up to the point of the application for the patent, which I think was along in May, 1928. Now, we picked up things as we went along, and this Fig. 1 covers those things that were picked up as well as what the original idea was.

Q. That is, the application when it was filed contained the results and the knowledge, all of the knowledge and results that you and Mr. McLaren had acquired previously and [563] up to that time with respect to

(Testimony of Harry W. Cole)

methods and apparatus for making this solid CO₂, is that correct?

A. And included the results obtained through actual reduction to practice.

Q. Is your answer to my question "Yes"?

The Witness: May I hear the question again, please?

(Question read by the reporter.)

Q. By Mr. Foster: That is correct, isn't it?

A. I think probably it is. I wish you would ask me simple questions. I have got a simple mind and you drag these questions out so long that by the time I get what is in the last part I forget what is in the first part.

Q. They are rather long.

A. I am not trying to block you off. I am trying to answer your questions and I am trying to give you an honest answer to them.

Q. I know you are, and I am not trying to confuse you by the length of my questions. Now, can you tell me, to the best of your recollection, the earliest date when you and Mr. McLaren successfully operated the apparatus illustrated in Fig. 1 of the patent in suit?

A. Oh, I think it is safe to say around May or June, 1927.

Q. And when did you or Mr. McLaren first successfully operate the apparatus which is illustrated in Fig. 2 of the patent in suit? [564]

A. About the same time. I think around May of 1927. I think about that time we were getting about as good production out of it as we ever got later.

Q. Do you mean by that, the production that you got by the apparatus of Fig. 2 of the patent was never very good?

A. No; I wouldn't say that.

(Testimony of Harry W. Cole)

Q. Was it commercially acceptable?

A. Oh, yes. We sold all that we made.

Q. You stated that your discussions with Mr. McLaren with respect to devising this method and apparatus of the patent in suit commenced shortly after July 4, 1925. Can you tell us the substance or the words of those discussions?

A. Not very well. That is too far away.

Q. Well, you did remember on direct examination that some discussion was had with respect to the necessity for economies in the operation of the Dry Ice Company; you and Mr. McLaren discussed that, I understood?

A. Yes; we discussed that and we discussed a lot of other angles to it, drew pictures of it, tore them up and threw them away, and started the next day.

Q. And the object—

A. Dragged the whole thing back and forth across the country two or three times.

Q. What did you drag back and forth across the country?

A. Just the ideas that was being threshed around.

Q. The first idea that you had for an apparatus for [565] making solid carbon dioxide which would accomplish the economies you wished, what was that? What was the first form that you conceived of it?

A. Well, the first form we thought of was of the vertical type machine of Fig. 5 type, because the thing we tried to do was to eliminate what seemed to be the faults in the methods that were then being used; and our first thought was to, if we can, let us eliminate them all; let us get rid of the snow tank; let us get rid of the transfer of the material; let us get rid of the tamping;

(Testimony of Harry W. Cole)

let us get rid of the external pressing; let us do this thing all in one leap.

Q. Did you suggest that to Mr. McLaren? Can you remember when?

A. I think it would be difficult to say who hit the idea first. It just sort of grew out of our discussions.

Q. You were aware that the losses or low yield which you wished to avoid in the dry ice operations was due to the fact that the snow had to be transported from the snow chamber to the press, as I understood you; you knew that?

A. We knew that was one of the losses; yes.

Q. And that was one of the losses which you wished to avoid? A. That is right.

Q. And you concluded that you could avoid that loss if you had the pressing operation and the snowing operation [566] performed in the same apparatus?

A. Yes.

Q. Now, whose idea was that?

A. That, again, is just one of those things that grew out of our discussions.

Q. Do you wish the court to understand that in these discussions, in some particular discussion you and Mr. McLaren said, in chorus, let us do the pressing and the snowing in the same machine?

Mr. L. S. Lyon: If your Honor please, I don't think that is proper cross examination. I think it is argumentative. The witness has testified—

The Court: I think so; it is argumentative.

Mr. Foster: I will withdraw the question.

Q. What is your best recollection as to whether you suggested that idea to Mr. McLaren or he suggested it to you?

(Testimony of Harry W. Cole)

Mr. L. S. Lyon: I submit that has already been asked and answered, your Honor, and again, it is argumentative.

The Court: I think he said that it was almost concurrent; he didn't know which was which. Isn't that correct?

Q. By Mr. Foster: Is that correct? The court asked you that. A. Yes.

Mr. Foster: Very well, your Honor.

Q. You had never before July, 1925, seen a device in which solid carbon dioxide was formed and pressed in the same [567] apparatus?

A. No; I never saw but the one operation at Long Island that was being commercially conducted by the Dry Ice Company at that time.

Q. And you had never seen prior to July, 1925, any description in any literature of a machine in which solid carbon dioxide could be formed and compressed in the same machine? A. No; I had not.

Q. The conception which you say you and Mr. McLaren had here in July or August, 1925, will you define for the court what that conception was?

Mr. L. S. Lyon: I object to that as not cross examination. I don't know how you define a conception.

Mr. Foster: He conceived a device and I am asking him to tell us what it was he conceived.

Mr. L. S. Lyon: I think, your Honor, he might be asked what the device was that he thought of.

The Court: Yes.

Mr. L. S. Lyon: But, to define a conception, I wouldn't know how he could do it.

The Court: He may describe the apparatus he conceived of.

(Testimony of Harry W. Cole)

Q. By Mr. Foster: What was the apparatus first conceived in July and August, 1925, to which you referred?

A. Well, I don't know as we had details as they show in the patent drawing. Those just didn't spring into mind just [568] as they are on the drawing there. Your invention covers a number of features. It is very difficult to go back a matter of 18 or 19 years and say that discussions went on back in that period, developed on a certain day a certain set picture.

Q. Well, you say that the invention involved several features and you have fixed July or August, 1925, as the date when you and Mr. McLaren jointly made some conception of the apparatus of this invention.

A. Well, that was the starting point.

Q. All right. Now, as of that first conception to which you referred in fixing the time as July or August, which of the features that you say are included in the invention of this patent were conceived of then?

A. Well, there was the broad feature of the elimination of the undesirable factors of the processes and the apparatus as used in the art at that time.

Q. What form of apparatus was conceived at that time to avoid those difficulties? That is my question.

A. Well, I would say our first idea was to do all this in a single chamber.

Q. And that is the conception you referred to in fixing the date of first conception as July or August, 1925, is that correct, Mr. Cole? A. Yes, sir.

Q. And were any other features of the invention which you [569] say includes several conceived at the same time?

(Testimony of Harry W. Cole)

A. Well, there was the other features that followed, were strung out during that whole period. [570]

Q. What was the next feature of the invention that was conceived by you and Mr. McLaren?

A. I don't know.

Q. What were the other features of the invention that were conceived of by you and him?

A. Well, those are all covered in the patent drawings.

Q. You have said that there were several features of invention, in one of your recent answers, and you have referred to one as a broad concept of pressing and snowing in one machine? A. That's right.

Q. What were the other features of invention that you had in mind in making that answer, that the invention had several features?

Mr. L. S. Lyon: I object to that as not proper cross examination, and argumentative.

Mr. Foster: This applicant was asked on his direct examination for his dates of conception of the apparatus of this patent.

The Court: I think that is true. I think the form of the question is not perfectly desirable. Suppose you just reframe it.

Q. By Mr. Foster: What are the other features of the invention of the patent in suit which were conceived by you and Mr. McLaren?

A. Well, that described or illustrated in Figure 2, [571] and the various elements shown symbolically in this schematic Figure 1. The elements are all over the page. Do you want me to point to them and show you what they are? [572]

HARRY W. COLE,

recalled.

The Court: You may proceed.

Mr. Foster: No further cross examination on behalf of the defendant, the George Pepperdine Foundation.

The Court: You withdraw that last question then, in order to clear the record?

Mr. Foster: Yes; I do so, your Honor.

Cross-Examination

Q. By Mr. Miketta: Mr. Cole, I would like to have you examine Defendants' Exhibit D for identification and let me know whether you have seen a machine such as is shown on this drawing at any time?

The Court: Would you identify that drawing for the record, Mr. Miketta?

Mr. Miketta: Defendants' Exhibit D for identification is a machine for pressing—

The Court: Yes; I know what it is, but I wanted the record to show.

A. No; I have never seen a machine or a drawing like that before, excepting as it was offered here in the evidence.

Q. By Mr. Miketta: You do not recall seeing that [574] particular machine at the Sixth Street and East River plant of General Carbonic Company in the late fall of 1926 or during the winter of '26-'27?

A. No; I never saw this machine.

Q. Were you at that plant during that period of time?

A. The fall of '26 and '27?

Q. Yes.

A. Yes; I was there, off and on.

Q. Was Mr. McLaren at that plant at that time?

A. Yes; he was.

(Testimony of Harry W. Cole)

Q. Did you see one substantially like that?

A. No.

Q. Did you see any machine in which snow could be formed and pressed into blocks during that period of time?

A. No.

Q. Did you see a machine of that type at the Maspeth plant of the Liquid Carbonic Corporation?

A. No.

Q. You have never seen a machine like that?

A. Never.

Q. Your answers are the same whether the question refers to the interior of the plant or to areas adjacent the plant, is that correct?

A. Yes, sir.

Q. By the Court: Have you ever seen any detailed drawings of such a machine, one that you would consider to be similar— [575]

A. No; I have not.

Q. —or identical to it?

A. No; I have not.

Q. By Mr. Miketta: Did Mr. McLaren at any time speak to you about a machine of that sort?

A. No; he never did.

Mr. Miketta: That will be all, your Honor.

The Court: Any further redirect?

Mr. Morris: We have no redirect. [576]

* * * * *

The Court: Any further cross?

Mr. Foster: No.

Mr. Miketta: I have none.

Mr. Morris: I am going to rest as soon as Mr. Lyon has [580] examined this.

The Court: There is no use of doing that.

Mr. Morris: The plaintiffs rest. [581]

* * * * *

(Testimony of Harry W. Cole)

Mr. Foster: May it please the court, Mr. Miketta and myself have conferred and consulted our clients with respect to the suggestion made by the court near the close of yesterday's session. Our plan of presenting our evidence, which we had agreed upon some time ago, involves the introduction of evidence with respect to the defendants' operations, first, and with respect to the prior art thereafter.

We respectfully petition the court for leave to pursue that plan. We have been able, in the light of the evidence presented in plaintiffs' prima facie case with respect to prior art devices and prior knowledge, to reduce to some extent the amount of evidence we think it necessary to introduce; so that we are quite sure that we can expeditiously, by direct examination, present our entire case in not too much time. We would like the privilege of presenting it all, having in mind the statement made by the court yesterday afternoon that if a ruling were made upon our motion to dismiss for the failure of plaintiffs to make a prima facie case, it might well be that the parties would be put to much more expense and the court to the expenditure of much more time by the passage of that ruling through the Circuit Court of Appeals, and perhaps the Supreme Court, and then back here. [687]

I think the same reasoning would apply to a direction that the defendant present less than its entire case. For example, if it present only evidence of its operations and non-infringement, for the reason that if we got to the Appellate Court with such a record, the Appellate Court would be unable, if it disagreed with the grounds of the decision in favor of the defendants, to find out any other grounds, since the record would not be there. And, as your Honor is well aware, sometimes the Circuit Court of

(Testimony of Harry W. Cole)

Appeals will affirm a holding for the defendant, though it will disagree with the lower court's finding of non-infringement, the Circuit Court of Appeals preferring a ruling of invalidity, nevertheless, unless the evidence of that art is there defined.

I would also mention these facts: Some of our witnesses are engaged in vital war work and some of them have come from considerable distance, and therefore we would like to as expeditiously as we can—and I think it will be quite expeditiously—present the defendants' entire case according to the plan that we had considered.

The Court: So permitted. [688]

* * * * *

EARL P. WELLS,

called as a witness by and on behalf of the defendants, having been first duly sworn, testified as follows:

The Clerk: State your full name, please.

A. Earl P. Wells, Glendale, California.

Direct Examination

Q. By Mr. Miketta: Will you state your present occupation, Mr. Wells?

A. I am manager of the refrigeration department of the Gay Engineering Company, refrigeration contractors, in Los Angeles.

Q. For how long have you been in that position?

A. I have been acting as manager about two years; prior to that, about four years as sales engineer.

Q. What engineering training have you had?

A. I graduated from the University of Illinois with a B.S. in general engineering, and I have spent all of my

(Testimony of Earl P. Wells)

time since then, 1926, in refrigeration and air-conditioning work, operations, research, and contracting.

Q. Have you had courses in mechanical engineering?

A. Yes, at the University of Illinois. It was a four years' course in engineering. Then I had some graduate work in refrigeration at the University of Michigan.

Q. Have you at any time visited the plant of the Natural Carbonic Products Company at Niland, California?

A. Yes, I was designer and contractor in rebuilding [693] the plant, in 1940. I visited the plant once or twice each year since then.

Q. Prior to 1940 did you ever visit that plant?

A. I was there in 1939, when the plant was owned by the Pacific Imperial Dry Ice Company.

Mr. L. S. Lyon: I move to strike the last statement out, on the ground that no foundation has been laid, your Honor.

The Court: It may be stricken.

Q. By Mr. Miketta: Did you visit the plant located at Niland, California, at any time prior to the time that it was owned by Natural Carbonic Products Company?

A. No; because the plant was taken over, I believe, in January, 1940, and our work started in March. I was at the plant, of course, between January and March, 1940.

Q. Were you ever at that plant before it was owned by Natural Carbonic Products?

Mr. L. S. Lyon: I object to that upon the ground that no proper foundation has been laid; the witness has not shown any knowledge of who owns this plant.

The Court: Objection sustained.

Q. By Mr. Miketta: Who owns that plant at Niland, California, at the present time, or in 1940?

(Testimony of Earl P. Wells)

Mr. L. S. Lyon: Objected to; no foundation laid.

The Court: Objection sustained.

Q. By Mr. Miketta: At the time of your first visit to the plant at Niland, California, did you observe any equipment at [694] that plant?

A. Yes, the plant had two Frick presses and sufficient equipment to make about theoretically, I think, ten tons per day.

Q. Who employed you to go down to Niland, California?

A. Do you mean at the time of my first visit to the plant?

Q. Yes.

A. The Pacific Imperial Dry Ice Company.

Q. When was that? A. That was in 1939.

Q. On your subsequent visit, in 1940, who was the employer?

A. Natural Carbonic Products, Incorporated.

Q. Did you see those two Frick presses in operation, Mr. Wells? A. Yes, I did.

Q. What was being manufactured?

Mr. L. S. Lyon: I would like to have the time fixed, if your Honor please.

The Court: Yes, fix it just a little more definitely, if you will.

Mr. Miketta: Q. I understood you to state that you were there in the spring of 1940, is that correct?

A. That's right.

Q. At that time, during the spring of 1940, you observed [695] the two Frick presses, is that correct?

A. That is correct.

Q. Did you actually see the presses in operation at that time? A. Yes, I did.

(Testimony of Earl P. Wells)

Q. What was being manufactured?

A. Carbon dioxide ice.

Q. You are familiar with liquid carbon dioxide?

A. Yes, I am.

Q. Will you please describe one of the Frick presses that you saw?

A. The presses are the vertical type, in which the platen which closes the chamber is at the upper end. The platen which does the compressing is at the lower end. Both platens are moved by hydraulic means. There is a liquid inlet and a gas outlet to the pressing chamber. That is about all.

Q. What liquid is supplied to the chamber by the inlet?

A. Liquid carbon dioxide.

Q. You say there was a return line?

A. Yes, a gas removing line, connected between the press chamber and a compressor.

Q. That compressor is part of what organization or system?

A. It is part of the liquefaction system of the plant, liquefying carbon dioxide. Its purpose is to raise the [696] pressure of the gas from the press to the liquefying pressure.

Q. Were there valves on the inlet line and on the outlet line?

A. Yes.

Q. Were there any other means of ingress and egress from that chamber?

A. On the line going to the compressor, between the press and the stop valve there is a branch line, which is used for venting the press chamber to the atmosphere.

Q. You stated that you saw the presses in operation?

A. Yes.

(Testimony of Earl P. Wells)

Q. Your description of this one Frick press would be the same regarding the other Frick press?

A. Yes; they are identically the same.

Q. During the operation of the press, Mr. Wells, was that vent to the atmosphere operated?

A. Yes; it was operated whenever the pressure in the press had dropped, after snowing, to approximately five pounds.

Q. Do you have in your possession a drawing showing the Frick presses which you observed during the spring of 1940?

A. Yes.

Q. Will you please produce that drawing?

Mr. L. S. Lyon: I don't believe this drawing has been exhibited to use in accordance with your Honor's direction at our conference. I am reminded that yesterday Judge McCormick refused to allow, in a patent case being tried there, [697] additional documents, and additional exhibits, which should have been exhibited at the pre-trial conference, and were not: I think your Honor's directions were clear enough in the letter received by counsel, and why we were not shown this drawing, I do not know.

Q. By Mr. Miketta: Where has this drawing been since you obtained it?

A. It has been in my possession all the time. [698]

* * * * *

The Court: Can't you do this, Mr. Miketta: Can't you withhold this portion of your examination having to do with this drawing until Tuesday? Let plaintiffs' counsel have [700] this drawing over Sunday, have it available to them here in the courtroom to study it, so that they will have an opportunity to make such examination on voir dire

(Testimony of Earl P. Wells)

as they may want to make; and then I will permit you to go ahead with this at that time.

Mr. Miketta: Very well, your Honor. May I have that marked for identification at this time?

The Court: Yet; let it be marked for identification.

The Clerk: Defendants' H.

Mr. Miketta: Defendants' H. [701]

* * * * *

Q. By Mr. Miketta: I show you Plaintiffs' Exhibit 3, Mr. Wells, and ask you to point out whether that drawing shows all of the elements which were a part of the Frick press at the plant of Natural Carbonic Products, Inc., at Niland, California during the spring of 1940 when you first observed that Frick press?

A. I see no vent to the atmosphere in this drawing, unless it may be in a schematic—

Q. Will you please indicate in pencil on such drawing the location of the—

Mr. L. S. Lyon: Wait just a minute. I object to modifying Exhibit 3. I do not think this witness should be allowed to make any physical change on Exhibit 3, which is the plaintiffs' exhibit.

The Court: Objection overruled. He may mark it and put his initials on it. It is done in open court. And do it in a red or some other type of pencil.

A. At this point on the blowback outlet there is—

Mr. Morris: May we come to the bench?

The Court: Yes; come right up here.

A. There is a vent valve to the atmosphere. There is a pipe going from that valve up about four or five feet, so the gas is discharged vertically. [703]

(Testimony of Earl P. Wells)

The Court: Let the record show that the witness has put a cross on the apparatus in Plaintiffs' Exhibit 3—

Mr. Miketta: Exhibit 4, your Honor.

The Court: This is 3 in evidence.

Mr. Miketta: Pardon me.

The Court: —part way up on the blowback outlet and has indicated by a line that that represents a vent valve. The marks put on by the witness are in red pencil.

Q. By Mr. Miketta: Will you also refer to the other sections or other portions of the drawing, Mr. Wells, and compare those with the apparatus that you observed at the plant at that time?

A. Yes. This is substantially correct. There is the upper and lower hydraulic cylinders, upper platen which closes the chamber, a liquid line connects to a pipe which connects to the snow chamber.

Q. You are referring to this as the liquid line?

A. The liquid line at this point, which has a valve connection to a larger pipe connection which is connected to the pressing chamber for the admission of liquid or snow.

Q. Will you indicate in red pencil what you referred to as the pressing chamber?

A. This is the pressing chamber.

Q. Do you mind writing—

The Court: Let the record show a "V" mark on the chamber on Exhibit 3 in red. [704]

Q. By Mr. Miketta: Now, calling your attention to the pipe diagrams appearing on Exhibit 3, are they an accurate representation of the various pipes, valves, and connections associated with the press as you saw it?

(Testimony of Earl P. Wells)

Mr. L. S. Lyon: I would like the record to show whether or not this witness has ever seen this drawing and studied it before it is presented to him here on the stand, your Honor.

The Court: Oh, if he can answer the question, he can answer it. If he can't, he can't.

Mr. Miketta: I object to the question at this time, your Honor. I think it is proper on cross examination.

The Court: That is true. Do not mark the drawing without the court's permission.

A. The schematic diagram does not show the vent valve.

Q. By Mr. Miketta: You are referring to which one?

A. To the lower schematic drawing; and this drawing also shows a heat exchanger between the snow trap and the compressor which was not in existence at the spring of 1940 before we re-built the plant.

Mr. Morris: May I have that answer read? I missed a word.

The Court: Yes.

Mr. Morris: "before we"?

The Court: "re-built the plant."

Mr. Morris: Did he say "we"? [705]

The Reporter: That is correct.

The Witness: That is correct.

Q. By Mr. Miketta: To whom do you refer by "we"?

A. Gay Engineering Company, a corporation at that time.

Q. Could you indicate on the lower schematic diagram appearing on Exhibit 3 the location of the air vent to which we have referred?

A. Yes. I can mark that on there if you wish.

(Testimony of Earl P. Wells)

Mr. L. S. Lyon: I would like to have the same objection, your Honor, that I made before to the witness altering Plaintiffs' Exhibit 4.

The Court: He has not altered it yet. Read the question.

(Question read by the reporter.)

The Court: He does not need to mark it to do that, if he will just point it out.

A. Yes. This is the line leading the gas from the press back to the snow trap and the compressor, and the branch connection is located at this point between the chamber and the stop valve; similarly on the other press.

The Court: Take your red pencil and indicate by a line, mark the course of that.

A. That is the stop valve on that vent line.

The Court: Very well. Let the record show the two red crosses on the lower schematic drawing made by the witness.

A. The other schematic drawing also will perhaps be marked in the same manner, because it shows the same thing in [706] enlarged view.

The Court: All right; put it on that one also, and let the record show it is being done.

Q. By Mr. Miketta: Mr. Wells, you have indicated on this upper schematic diagram a little line extending upwardly from the upper dotted line extending from the snow chamber towards the right, have you not?

A. That is right.

Q. And the cross at the upper end of that line indicates what?

A. The valve.

Q. To what is the valve connected?

A. There is a section of about four feet of one-inch pipe connected to that valve.

(Testimony of Earl P. Wells)

Q. Into what does that empty?

A. It empties into the atmosphere above the press.

Q. And that same construction applied to both presses? A. Both presses were the same.

Q. Do you recall whether you have seen a drawing such as Plaintiffs' Exhibit 3 and had been asked to modify it or change it in any way—

Mr. L. S. Lyon: Will you read that question?

Q. By Mr. Miketta: —prior to this time?

Mr. L. S. Lyon: Will you read that question to me, please?

(Question read by the reporter.)

Mr. L. S. Lyon: I object to that as immaterial, [707]

The Court: Objection sustained.

Q. By Mr. Miketta: You have stated, Mr. Wells, that you were employed by Natural Carbonic Products, Inc. to do some work down at their Niland plant. Will you please state what that work consisted of? Did it have anything to do with these presses?

A. No. We had no work in connection with the presses, although I was preparing to do some work on the Frick presses at the time that the Natural Carbonic Products, Inc. took the plant over from Pacific Imperial Dry Ice Company. I had been studying the presses at that time.

Q. Have you repeatedly visited the Niland plant since that time?

A. Yes; I have been there once or twice each year or oftener since that time.

Q. What is the most recent visit that you made at the plant?

A. I believe it was April the 22nd of this year.

(Testimony of Earl P. Wells)

Q. Has the construction of the Frick press and the arrangement of the valves and pipes which you have indicated on Exhibit 3 changed in any particular since that time?

A. The only change that I am aware of that has been made since 1939 has been a substitution of leather packings for piston rings in the upper hydraulic cylinder, with possibly also a change in the sealing arrangement of the upper plate. There has been no change, to my knowledge and inspection of [708] April 22nd, to the valve arrangement or the pipe arrangement with the exception, perhaps, of the substitution of a plug type valve on the liquid line for a needle valve which was installed there in 1939.

Q. By the Court: The plug type was installed then?

A. No; the plug type has been installed since then; I should say about two years ago.

Q. A needle valve in it before?

A. That is right.

The Court: Speak up just a little louder. I don't think Mr. Foster can hear you well and these other gentlemen here are all interested.

Q. By Mr. Miketta: But on all of your visits to the plant you have observed that air vent valve as you have indicated it on Exhibit 3, is that correct? [709]

* * * * *

A. Yes.

Q. By Mr. Miketta: And you have seen the presses in operation at various times since the spring of 1940?

A. Yes.

Q. Is that correct? A. Correct.

Q. What was your first contact, Mr. Wells, with pressing or molding machinery?

Mr. L. S. Lyon: I object to that as immaterial.

(Testimony of Earl P. Wells)

The Court: Objection overruled. It is a matter of his qualifications. [710]

A. I should say that during the past ten years I have seen various types of presses, such as wine presses and rubber molding presses. My first contact with rubber molding presses was in 1920, when I was employed at the Brunswick-Balke-Collender Company.

Q. Since 1920, in addition to rubber molding presses and wine presses, have you had contact with other presses and pressing operations?

Mr. L. S. Lyon: I object to this, your Honor, upon the ground that no issue is pleaded in the answer. There is no pleading of any prior knowledge by this witness of any prior art, prior art structures.

The Court: It is a matter of qualification of the man as an expert. Otherwise it would not be admissible. Objection overruled. You may answer.

A. I cannot recall any other types of presses that I worked with.

Q. By Mr. Miketta: Referring to your rubber molding presses, about 1920, will you describe very briefly the elements of such a press?

Mr. L. S. Lyon: I object to that upon the ground that it is not pleaded; it is not admissible under the issues. Obviously, it is not for the purpose of establishing the experience of this witness. but to establish experience with something alleged to be in the prior art, of which no notice is given. [711]

Mr. Foster: As Mr. Lyon well knows, no notice is required by statute, to introduce evidence showing the state of the art, and certainly this witness is qualified to help the court in showing what was old, and showing the state of the art. The objection does not lie.

(Testimony of Earl P. Wells)

Mr. L. S. Lyon: If the evidence is offered for the limited purpose of construing the patent on the issue of infringement, I concede it may be introduced for that purpose without pleading, but the court should rule that it is not to be received on the issue of validity, either of anticipation or invention, and for authority on that specifically—

The Court: You don't need any. I don't think there is any doubt about the law. I think it is only admissible for the limited purpose indicated, and it will be so restricted. You may answer.

A. These presses had movable platens, by hydraulic and screw means, which closed the molds against other movable platens. Some of the molds were hollow, and were for the purpose of conforming soft rubber to molds in which they were heated by steam for hardening purposes.

Q. Have you finished your answer? A. Yes.

Q. Were the platens movable toward one another?

A. Yes.

The Court: That means reciprocally so? [712]

A. Yes, sir.

Q. By Mr. Miketta: How would you describe the chamber when the platens were in their closest position to one another?

Mr. L. S. Lyon: May it be understood that the evidence on this subject is controlled by your Honor's ruling, without further objection?

The Court: Yes, to this entire line, to save time and trouble of doing it over again. [713]

* * * * *

The Court: You may proceed.

(Testimony of Earl P. Wells)

Q. By Mr. Miketta: Mr. Wells, assuming that you have a chamber, or assuming that in the Frick press the only elements you have consist of the walls which form the chamber and the piston and the platen; and assuming that these three elements, the piston, the platen, and the walls form a closed, completely gas-tight chamber, could you make snow in that, carbon dioxide snow?

Mr. L. S. Lyon: I object to the question as indefinite and uncertain and as immaterial. There is no issue of that kind in this case, that you could make ice in an apparatus that had nothing to it except some walls and two platens.

The Court: Objection overruled.

A. If liquid carbon dioxide could be admitted to the chamber, snow would be formed in there until the pressure reached 60 pounds gauge, but not above that pressure.

Q. By Mr. Miketta: I show you Defendants' Exhibit A for identification and particularly call your attention to the assemblage shown and identified as A on this exhibit; could you make snow in that?

A. Not without an inlet.

Mr. L. S. Lyon: I object to that, your Honor, on the ground that that is incomplete and leading. Certainly, just using the word "that" here—can the witness make snow in "that"—there is no foundation laid that the witness has any experience in this thing. [727]

The Court: Yes. I think you had better just briefly describe this thing here.

Q. Were you in court when this was testified to?

A. Yes, sir.

Q. You heard the testimony with regard to it?

A. Yes, sir.

(Testimony of Earl P. Wells)

The Court: You may answer.

A. There is no means shown for admitting liquid CO_2 to that chamber; so it is impossible to make snow in there. [728]

* * * * *

Q. I call your attention, Mr. Wells, to the device illustrated and identified by the letter B on Defendants' Exhibit A for identification; and in that device you will note I specifically call your attention to the fact that there is a pipe provided through the wall of the chamber. Could you make snow in that sort of a chamber?

A. If the pressure in the chamber were initially atmospheric pressure and carbon dioxide liquid were expanded in the chamber, snow would be formed until the pressure reached 60 pounds gauge.

Q. What would happen after that?

A. Beyond that point, because of the triple point. the snow would be converted to liquid again.

Q. If you continued—

The Court: Just one moment. Now, in order to make the record clear, as far as A is concerned if you lift up the platen, you could put cotton or wood pulp or something in there and squeeze it, couldn't you?

A. Yes, sir.

Q. But you could not put in some liquid carbon dioxide in [729] there; you would not have any way of getting it in, would you?

A. As soon as you poured it in there it would change to snow immediately while it was being poured in.

Q. In B you would have a conduit for the influent?

A. Yes, sir.

(Testimony of Earl P. Wells)

Q. That is the only difference in the two devices, isn't it?

A. Yes.

Q. By Mr. Miketta: And if I understood your answer correctly, if you continued the admission of liquid carbon dioxide into the device shown in B after some snow had been formed and the pressure runs to 60, then the continued introduction of liquid in there would not result in an expansion of that liquid into additional snow, is that correct?

A. That is correct; and the existing snow would be converted to liquid.

Q. Now calling your attention to the diagram indicated at C, can you form in the apparatus there shown a solidified liquid carbon dioxide upon the introduction of liquid carbon dioxide into that apparatus?

A. Yes; as long as the vent line is open sufficiently to keep the pressure in the chamber below 60 pounds gauge.

Q. By the Court: By "60 pounds" you mean the triple point, whether it is sixty decimal one, two, three, or four?

A. Yes, sir. That pressure varies with the atmospheric [730] pressure.

The Court: Certainly.

Q. By Mr. Miketta: Will you please describe the apparatus for the conversion of liquid carbon dioxide into snow at the plant of the Natural Carbonic Products Company during the year 1940?

A. During that year there were only the two Frick presses which were as previously described.

Q. Was there any addition or change in apparatus in 1941?

(Testimony of Earl P. Wells)

A. In 1941 the company purchased a H. P. M. press, installing it in about February, I believe, putting it into operation in about March.

Q. Of 1941? A. 1941.

Q. And by "H.P.M." you refer to what?

A. Hydraulic Press Manufacturing Company's press, I believe.

Q. Was that press still at the plant on your last visit thereto? A. Yes.

Q. Have you ever seen that press in operation?

A. I saw it first in operation in the summer of 1941 and several times since.

Q. What material was being supplied thereto?

A. Carbon dioxide liquid.

Q. And what product was being made? [731]

A. Dry ice.

Q. By dry ice you mean solidified carbon dioxide?

A. Yes.

Q. Will you please describe the general construction of the H. P. M. press?

A. The press has a chamber in which liquid CO₂ or snow, that is, carbon dioxide snow, can be placed or admitted, with a piston for compressing the snow, a platen for closing the chamber and for opening to remove the ice. It also has a liquid inlet, a gas outlet, and a vent pipe. It has hydraulic means for moving the pressing plunger and the platen.

Q. Where is the block outlet on this type of press?

A. The platen which opens the chamber is on the lower end of the chamber in the reverse position from the Frick press.

(Testimony of Earl P. Wells)

Q. You mentioned a vent to air or vent to atmosphere; is that connected to the return line as in the Frick presses?

A. No. This vent line is connected directly to the snowing chamber or pressing chamber.

Q. I call your attention to Plaintiffs' Exhibit 4 and ask you to examine it and point out to the court whether or not that correctly describes the H. P. M. press? [732]

* * * * *

A. This is the pressing—

The Court: Wait a minute. There is a question. Does that, in your judgment, accurately depict the design and construction of the H. P. M. press? A. Yes.

Q. Which was there at that time?

A. Yes; in all general appearances it has the same general construction and arrangement. There is the snow chamber with its operating plunger marked "upper platen" which is moved downward by the ram operated by an hydraulic cylinder. Below we have a lower platen which is moved upward to close the chamber by means of a rod not very clearly shown, and the lower hydraulic cylinder. There is a chamber inlet marked here.

Q. By Mr. Miketta: For what purpose?

A. For the admission of liquid carbon dioxide; and a blowback outlet for the removal of gas. However, I see no indication of the vent connection on this drawing.

Q. Where would that vent connection be?

A. That is adjacent to the liquid inlet pipe and was [733] part of one of the original openings in the press as it was purchased.

Q. Will you indicate the location of that vent to which you have referred?

A. It was to the left of the chamber, the CO₂ inlet, at a distance, I would judge, of two or three inches.

(Testimony of Earl P. Wells)

Q. By the Court: And runs where?

A. That goes through a stop valve, and then with a short piece of pipe discharges upward to the atmosphere.

Q. Will you take your pencil and mark the outlet with a small cross and draw the line roughly where it proceeds from the outlet? Indicate what it is at the top.

A. (Witness marking on diagram) I will mark it "vent pipe and valve."

Q. Yes. And where in the pipe is the valve located?

A. The valve is located close to the press; I should say within a foot of the press.

Mr. Morris: Would it be improper at this time to have him indicate likewise where the end of that vent valve is? He has done it on that one but he has not on this one.

The Court: Yes. You might do it on that one, and then that will complete it.

A. That represents the pipe going upward.

The Court: Yes.

A. On the schematic drawing, which is part of the same drawing, there is also another indication of that vent line, [734] which would be indicated at this point.

Q. Would you do the same thing with that one?

A. (Witness marking on diagram) And there is another schematic section drawing there which likewise should have it.

Q. By Mr. Miketta: I call your attention, Mr. Wells, to the diagram at the bottom of the—

A. It is marked "flow diagram," and there is also the vent shown on that flow diagram. It should be at this point.

The Court: Mark it.

(Testimony of Earl P. Wells)

Q. By Mr. Miketta: When is the first time that you observed the air vent which you have indicated on Plaintiffs' Exhibit 4?

A. I saw it in the summer of 1941 at the time of my first visit after the press had been installed.

Q. Have you seen that press in operation?

A. I saw it as recently as April 22nd of this year.

Q. When is the first time you saw it in operation, Mr. Wells?

A. In the spring or summer of 1941.

[735]

* * * * * * * * *

Q. By Mr. Miketta: Did you see the air vent being operated during the periods of time that you observed the press in operation?

A. Yes; the vent was in use at every time that I visited the plant.

Q. At what stage in the operation of the press is that air vent operated, Mr. Wells?

Mr. L. S. Lyon: We are talking now about Exhibit 4, your Honor? There are air vents on Exhibit 4 and 3.

The Court: Clarify it, please.

Q. By Mr. Miketta: During the operation of the machine indicated on Plaintiffs' Exhibit 4.

A. After snow has been formed in the chamber and the gas released by the ice has left to the extent that the pressure has dropped to about 5 or 10 pounds in the chamber, the vent valve is opened and the gas connection to the compressor is closed.

Q. What pressure drop is reached in the chamber?

A. This permits the pressure to drop to atmospheric pressure.

(Testimony of Earl P. Wells)

Q. Will you please describe the operation of this H. P. M. press, Mr. Wells? And in your description you may refer to the diagram or diagrams showing various stages in the operation of the press—which diagrams, your Honor, were exhibited to plaintiffs' counsel at the time of one of the conferences prior to trial, except that they were not colored [736] as they are now.

The Court: You have dolled them up a bit.

Mr. Miketta: May we have this marked for identification at the present time?

The Court: Yes; it may be so marked.

The Clerk: Defendants' I.

[Note: Defendant's Exhibit I will be found in the Book of Exhibits at page 1367.]

A. In the first diagram, No. 1, the—

Mr. L. S. Lyon: Is that for identification?

The Court: Yes; for identification.

A. —the chamber is empty and ready for the production of carbon dioxide snow, with all valves closed and the platen closing the chamber.

Mr. L. S. Lyon: May I ask if this is the diagram of the Frick presses or the operation of the H. P. M. presses?

Mr. Miketta: The question and the answer both refer to the H. P. M. press in diagrammatic form.

A. In the second diagram liquid carbon dioxide is being admitted through the valve opening, shown on the left.

Q. What is the position of the return line valve?

A. The return line valve is open to the compressor so as to release gas that is formed during the expansion process. The vent valve is closed.

(Testimony of Earl P. Wells)

Q. And by the "vent valve" you are referring to the valve, the line and valve immediately beneath the return line and valve? A. That is correct. [737]

Q. And by that vent to air you also refer to the vent which you have indicated in red on Plaintiffs' Exhibit 4, is that correct? A. Yes.

Q. Very well.

A. The diagram is marked "snow formation." However, that is contingent upon the pressure in the press. If the pressure is above 75.1 pounds absolute, there is no snow formation.

Q. Up to the time that the pressure is below 75.1 absolute does any snow formation take place?

A. Yes. From below this triple point the snow is formed, the gas is—

Q. Pardon me, Mr. Wells. Does 75.— A. 1.

Q. —1 refer to or is it equivalent to 60 pounds pressure, approximately? A. Yes.

Q. 60 pounds gauge?

A. 60 pounds gauge is an approximate value, depending upon atmospheric pressure. 75.1 is the accepted accurate figure. In diagram 3 the inlet valve is shown closed, while the gas return line to the compressor is still open and the pressure in the press is falling. [738]

* * * * *

Q. Have you observed the pressures existing in the chamber of this H. P. M. press, Mr. Wells?

A. Yes; I have.

Q. Will you state what the maximum pressure reaches?

A. The highest pressure that I have ever witnessed in this chamber is 75 pounds.

(Testimony of Earl P. Wells)

Q. Is that maximum pressure reached in the chamber during all of the operations that you have witnessed on the H. P. M. press?

A. It occurs only during the liquid inlet period.

Q. Have you observed any operations of the H. P. M. press where the pressure did not go above 60 pounds?

A. Yes. I conducted some experiments myself at pressures below 60 pounds gauge.

Q. And they were conducted on the H. P. M. press in the plant of this defendant?

A. Yes; and also on the Frick presses.

Q. Do you know whether or not commercially, as a part of the regular operation, the H. P. M. press was operated with gas pressures within the chamber not in excess of 60 pounds?

A. I am not familiar with the amount of time which the press might have operated at various press pressures, [739]

* * * * *

A. During one visit, which I believe was in 1943, I saw the plant being operated at a pressure below 60 pounds.

Q. So that the maximum pressure within the chamber of the H. P. M. press at that time did not exceed 60 pounds? A. That is correct.

Q. And you have personally observed the pressing operation when the maximum pressure within the chamber of the H. P. M. press was above 60 pounds?

A. Yes.

Q. If we assume that the maximum pressure within the chamber of the H. P. M. press does not exceed 60

(Testimony of Earl P. Wells)

pounds what takes place in Fig. 3 of Defendants' Exhibit I?

A. In Fig. 3 the snow formation has been completed and only the remaining gas is being removed, with the exception that some gas is liberated during the further cooling of the snow from the triple point to atmospheric pressure; so gas [740] continues to leave the chamber and the pressure continues to drop.

Q. Assuming that the maximum pressure within the chamber of this H. P. M. press had been above 60 pounds—and I think you referred to 75 pounds at one time—then what would be taking place in Fig. 3 of Defendants' Exhibit I?

Mr. L. S. Lyon: If your Honor please, may we have it clear whether these figures are gauge pressures or pressures within the chamber?

The Court: Yes. Indicate in your question which you refer to.

Mr. Miketta: Let me lay a little foundation for that, your Honor.

Q. At the plant of Natural Carbonic Products Company is there a pressure gauge connected to the chamber of the press?

A. Yes.

Q. And is it calibrated in absolute pounds or gauge?

A. Gauge.

Q. So that when you refer to pressures ordinarily you refer to gauge pressures?

A. Yes.

Q. And not to absolute?

A. Yes; gauge unless otherwise specified.

Mr. Miketta: Does that clarify the point, your Honor?

The Court: Yes.

(Testimony of Earl P. Wells)

Q. By Mr. Miketta: Assuming that the pressure as indicated [741] by the gauge, the maximum pressure, was 75 pounds, so that a maximum pressure of 75 pounds existed in the chamber of the H. P. M. press, that maximum pressure would have taken place before the inlet valve was closed, is that correct? A. Yes.

Q. What operation would then be taking place in Fig. 3 which shows the inlet valve closed?

A. The body of liquid which would be in the chamber would be boiling and subliming and converting to snow or ice with the evolution of gas.

Q. And at what pressure does such evolution or boiling take place?

A. At 60.4 pounds gauge under standard sea level conditions.

Q. Before we leave Figs. 2 and 3, Mr. Wells, have you ever observed the seal or so-called contact plane between the lower platen and the bottom of the H. P. M. press? A. Yes.

Q. Is that a tight closure?

A. It is a mortise and tenon type metallic joint which is substantially tight when it is clean and new. [742]

* * * * *

Q. By Mr. Miketta: At the times that you actually saw the pressing operation was that closure gas-tight?

A. Practically every time that I observed the press there has been leakage around this joint due to deposit of water ice there from the atmosphere and due to damage to the metallic surface by operation of the press. There is generally a leakage around the gasket during operations.

(Testimony of Earl P. Wells)

Q. Now continue with the description of the process as it takes place in the H.P.M. press, Mr. Wells. What is the next step after the operation shown in Fig. 3?

A. In Fig. 4 the return valve is closed, indicating that the pressure has dropped to probably 5 or 10 pounds; the liquid inlet valve is closed and the vent valve to the air is opened to release any remaining gas. The lower platen has been dropped to also release any gas that may be under the block or under the pile of snow.

Q. Does any considerable volume of gas escape when that platen is lowered?

A. Yes; there is a large visible rush of gas out of there.

Q. Just to give us a picture of this press, Mr. Wells, what are the dimensions of the chamber of the H.P.M. press, that is, the inside dimensions?

A. Cross-sectional dimensions horizontally are 20 inches by 20 inches.

Q. How high is the boss on that lower platen, if you [743] know?

A. It is approximately two inches.

Q. How far is that lower platen dropped when it is moved in to the position indicated in Fig. 4?

A. It is dropped so that the top of the platen is slightly above the bottom of the chamber, so that snow will not fall out.

Q. Do you know the width or the size of that boss on that lower platen?

A. In horizontal dimensions?

Q. Yes.

A. There is a gap of approximately an eighth of an inch between that boss and the chamber.

(Testimony of Earl P. Wells)

Q. So that there is an eighth of an inch space all around that boss and the inside walls of the chamber, is that correct? A. Yes.

Q. By the Court: The diameter of that chamber, you said, was what?

A. It is square, your Honor; 20 inches by 20 inches.

The Court: Oh, it is square and not cylindrical?

A. Yes.

Q. 20 x 20? A. Yes.

Q. And the height?

A. I am not familiar with the exact height, but I would [744] judge it to be about four feet.

Mr. Miketta: And the boss on that lower platen, your Honor, I was trying to get the dimension of that.

Q. What is that, Mr. Wells?

A. Approximately — well, it would be approximately 19 and 3/4 inches by 19 and 3/4 inches.

Q. So as to leave a space of about an eighth of an inch between that boss and the walls of the chamber, is that correct? A. Yes. [745]

* * * * *

Q. By Mr. Miketta: Will you again refer, please, to Defendants' Exhibit I. I believe you have been testifying about Fig. 4 of this exhibit, and, as I recall your testimony at that stage, the vent to atmosphere, or vent to air, is opened, and the lower platen is dropped, is that correct? A. That is correct.

Q. What is the position of the pressing plunger at that time?

A. The lower plunger is down about one inch and a half.

(Testimony of Earl P. Wells)

Q. The lower platen?

A. The lower platen, yes.

Q. What is the position of the pressing plunger within the chamber?

A. The pressing plunger is at the top of the chamber.

Q. What is the next step in the operation of this apparatus?

A. The next step is shown in Fig. 5, where the snow is being compressed by the plunger moving downward, while the lower platen is still in the slightly opened position.

Q. What is the position of the vent to atmosphere?

A. The vent to air is opened, as in the previous diagram.

Q. Is the solidified carbon dioxide completely compressed into a block, in Fig. 5? [753]

A. There is a little further pressing action performed by the lower platen moving upward after the plunger has reached its practically bottom position of maximum compression.

Q. Where is that illustrated on Defendants' Exhibit I?

A. Fig. 6 shows the lower platen moved up to almost closed position.

Q. Is there any further downward move of the pressing plunger from the position shown in Fig. 5, and that shown in Fig. 6?

A. Yes, there is a small further movement as the snow is compressed, and as the gas is released.

Q. During the operation shown in Fig. 5 is the vent to air open? A. Yes.

(Testimony of Earl P. Wells)

Q. Will you continue with your description of the process, please?

A. In Fig. 7 the plunger is being raised, and the lower platen is dropped to a still further open position, in which the top of the boss is just slightly below the bottom of the chamber. The vent to air is still open, the block of ice remaining suspended in the chamber due to the friction between the block and the chamber walls.

This situation continues into Fig. 8, at which time the pressing plunger has reached its uppermost position, when the vent to the air is closed. By this time the block has [754] usually freed itself from the sidewalls and drops by gravity onto the lower platen, which is then lowered to reveal the block and enable its removal. Dropping the block is assisted to some extent by gas above the block, or by the injection of hot gas to create a pressure there to force the block to drop.

Q. Are we to understand that sometimes gas is injected in the space or chamber above the block?

A. That is, high pressure gas off of the compressor discharge.

Q. For the purpose of pushing the block out of the chamber?

A. Pushing the block down. The same effect can be obtained by slightly opening the liquid valve, and permitting a small amount of liquid to gasify.

Q. Mr. Wells, during the period that the chamber is being supplied with liquid carbon dioxide is that chamber without any communication with the outside?

Mr. L. S. Lyon: I object to that as indefinite. What do you mean by outside?

The Court: Objection sustained.

(Testimony of Earl P. Wells)

Mr. Miketta: I will rephrase that.

Q. During the period of time that the chamber is being supplied with liquid carbon dioxide, is that chamber isolated?

Mr. L. S. Lyon: Same objection.

Q. By Mr. Miketta: Do you understand the question, Mr. [755] Wells?

Mr. L. S. Lyon: I objected to the question, your Honor.

The Court: During the time that the liquid CO₂ is flowing into the chamber through the inlet is the chamber, other than the inlet, hermetically sealed?

A. No, the return line is open for the withdrawal of gas.

Q. By Mr. Miketta: During the period of time that solidification of the liquid carbon dioxide is taking place within the chamber, is that chamber closed or sealed?

A. No.

Q. Why not? A. Because—

Mr. Morris: I object, your Honor, to this question, that it is closed or sealed. We are using terms in that question that are used maybe in one sense, but might not be used in the sense that they are used in the patent or in the claims thereof.

The Court: Objection sustained. Reframe your question, please. I particularly used the words "hermetically sealed" to avoid the word "closed."

Q. By Mr. Miketta: During the period of time, Mr. Wells, that solidification is taking place within the chamber, is there any passage of gas into or out of that chamber? A. Yes.

(Testimony of Earl P. Wells)

Mr. Morris: May I object to that, because this witness has been taken through the drawings which show the state of [756] the valves, whether they are open or closed, that is, both the inlet and the outlet, so the question that is now propounded to the witness would be, we submit, a conclusion.

The Court: Objection overruled. He is an expert.

A. Gas is leaving the chamber through the return pipe to the compressor, and some additional gas is escaping around the bottom platen due, perhaps, to the imperfection, of dirt and foreign material, preventing a perfect seal.

Q. By Mr. Miketta: What is the pressure within the chamber prior to the pressing of the solidified carbon dioxide into a block, immediately prior to the step of pressing the carbon dioxide into the block?

Mr. L. S. Lyon: I object to that. No time is fixed; no occasion mentioned. The question is too indefinite.

Mr. Miketta: Limiting it to your observation of the machine, Mr. Wells.

Mr. L. S. Lyon: Unless the witness will state that the pressure at that stage of the operation was always the same when he observed the machine, I think he should state specifically what the pressures were on the different occasions he saw the machine.

Mr. Miketta: I will ask the witness that, Mr. Lyon.

Q. At the various times that you observed the operation of the H. P. M. press, Mr. Wells, was the pressure within the chamber, immediately prior, or at the time that the pressing plunger first started to move down, substantially the same? [757]

A. Yes, it was always at atmosphere pressure, because of the opening to the air.

(Testimony of Earl P. Wells)

Q. By the Court: Actual atmosphere or substantially atmosphere?

A. Substantially. That is, gas had ceased to flow in any quantity out of the vent, so that there was practically equilibrium established between the chamber and atmosphere.

Q. By Mr. Miketta: When you say equilibrium established between the chamber and the atmosphere, the only difference then would be what?

A. Slight friction in the pipe due to a very small amount of gas moving outward, perhaps.

Q. As you have observed the operation of the machine, was the lower platen in its completely closed position, prior to the completion of the pressing stroke of the plunger?

A. No, it was dropped approximately one inch and a half.

Q. You have described the operation of the H. P. M. press. What is the relationship between the operation which you have described and the operation of the Frick press?

A. They are substantially the same, except that the two machines are built in reverse, or located in a reverse position: the bottom of one being functionally the top of the other, with the further exception that the block does not drop upward, of course. It has to be pushed up by the plunger in order to remove it from the press.

Q. In the Frick press, therefore, the block is actually [758] ejected by the pressing plunger? A. Yes.

Q. That isn't true in the H. P. M. press?

A. Yes. it is not true.

(Testimony of Earl P. Wells)

The Court: In other words, it isn't pulled up by the hydraulic appliance, but is pressed up by the lower platen operated by the hydraulic pressure under the product?

A. In the Frick press the pressing plunger also forces the block upward out of the press.

The Court: Otherwise they are mechanically the same?

A. Mechanically the same. The function is the same.

Q. By Mr. Miketta: Would it be correct, Mr. Wells, to say that the operation of the Frick press can be diagrammed or illustrated by simply turning Exhibit I upside down?

A. Yes, with the exception of the block dropping.
[759]

Q. Of course, the block would be pushed up now by the plunger, instead of being lifted up? A. Yes.

The Court: Is this being introduced in evidence?

Mr. Miketta: Not yet. It is marked for identification as Defendants' Exhibit I.

[Note: Defendants' Exhibit I will be found in the Book of Exhibits at page 1367.]

The Court: It may be received in evidence as Defendants' Exhibit I purely for the purpose of illustrating the testimony given by this witness.

Q. By Mr. Miketta: While you were at the plant of the Natural Carbonic Products Company did you at any time take any pressure readings, on the Frick and H. P. M. presses? A. Yes, several times.

Q. Have you kept a record, or have you made a diagram showing those pressures? A. Yes, I have.

(Testimony of Earl P. Wells)

Q. Can you produce it? Your Honor, this is the chart that was exhibited to counsel this morning. I would like to have it introduced, as the other exhibit was introduced this morning, and marked for identification, subject to counsel's study of it, and giving him an opportunity to cross-examine the witness on this.

The Court: It may be marked for identification as the defendants' next in order.

Mr. L. S. Lyon: I would like to inquire, your Honor, if this chart was in existence on the occasion of our pre-[760] trial conference. If not, when it was produced.

Mr. Miketta: I will ask the witness some questions from which you can derive that information.

Mr. L. S. Lyon: I would like to object to the use of this chart, if it is based on records, and unless we have a chance to examine the records on which it was based.

The Court: Of course, it is just marked for identification so far.

The Clerk: Defendants' J.

[Note: Defendants' Exhibit J will be found in the Book of Exhibits at page 1368.]

The Court: Would you like to examine the witness on voir dire?

Mr. L. S. Lyon: I would, if the chart is to be used.

Q. By Mr. Lyon: When was this chart made, Mr. Wells? A. Approximately April 30th, this year.

Q. When did you first show it to Mr. Miketta?

A. On that same date.

Q. This is a chart of certain pressure readings, is it not? A. Yes.

Q. Did you make this chart? A. Yes.

(Testimony of Earl P. Wells)

Q. From memory of those pressure readings?

A. No, from a record of readings which I took at the plant.

Q. Where are those records? A. In my office.
[761]

Mr. L. S. Lyon: I think, your Honor, we would like to have the records here then. This is not the best evidence.

Q. By Mr. Miketta: Mr. Wells, are they in the form of formal records, or just memoranda?

A. Just memoranda incorporated in connection with other work, scattered throughout other documents.

Mr. Miketta: If the court please, I will ask Mr. Wells to obtain them, and have them available for counsel's inspection. I have not seen them myself. Engineering figures of this sort are ordinarily just kept in memoranda form, and transcribed into the form of graphs.

The Court: Bring them Tuesday morning.

Mr. L. S. Lyon: May I ask, Mr. Wells, if your records show the date in July, 1939, of those pressure readings that are represented by valve No. 1 on this chart?

A. I believe they do, yes.

Q. Did you make a record of what you saw there at that time, on your visit, as to what readings or values you recorded. A. Yes.

Q. That is the record you have in your office.

A. Yes.

Q. Will you bring in the complete record, please? Is your answer the same for these other readings that are charted on this exhibit, that you have similar records?

[762] A. Yes.

Q. I would like to have your complete records of those visits. Have you records, similar records of other visits to

(Testimony of Earl P. Wells)

this plant, during the years 1940, 1941, 1942, 1943 and 1944, which are not charted on this exhibit?

A. I don't know. I didn't look through all my records to see what further records I had.

Q. You may have other records?

Mr. Miketta: I will assure you, Mr. Lyon, if we find any additional ones we will produce them. [763]

* * * * * * * * * *

Q. In your judgment, Mr. Wells, what is the purpose or object of the step of venting the chamber to atmosphere and lowering the lower platen during the operation of the H. P. M. press. [765]

A. There are several reasons for it. One is safety precaution. In the event that the gauge line is plugged and not reading accurately, or if the snow line is plugged, there could exist in the chamber dangerous pressure which would cause an explosion when the lower platen is dropped.

Q. Explosion of what?

A. Explosion of the ice and snow, or a block or a sudden release of gas which might injure the operator by—

The Court: Now, just a minute. It is not the snow or ice that explodes?

A. Well, there is to this extent, your Honor, that inside the block as it is being formed there are sometimes pockets of gas which—

Q. Then, it is gas which explodes, isn't it?

A. Yes; gas in the block which causes fragments of the block to fly off if the lower platen is removed while there is still pressure in the press.

(Testimony of Earl P. Wells)

The Court: Yes.

A. And there is another advantage, that speed of production can be increased by not waiting for the compressor to remove the last five or ten pounds of gas in the chamber. That about covers it, I think.

Q. By Mr. Miketta: Does Exhibit I correctly illustrate the operation of the H. P. M. press as you observed it?

A. Yes.

Q. And it also correctly illustrates the operation of [766] the Frick press as you observed it, with the inversion of the diagrams and the exception as far as ejection of the block is concerned?

A. Yes.

Q. To which you have referred?

A. Yes.

Mr. Miketta: That will be all.

The Court: Just one question.

Q. You said, without waiting for pressure to take out the last few pounds of gas. What is the pressure maintained ordinarily on the outlet conduit leading to the compressor?

A. At the Natural Carbonic plant the compressor can continue to pump on its suction line until a vacuum is produced. That vacuum will be produced if the valve in the return line is closed, and so the pressure in the press can be stopped at any point down to a vacuum of maybe 20 inches.

The Court: I see.

Mr. Miketta: In other words—may I ask another question?

The Court: Yes, yes.

Q. By Mr. Miketta: In other words, if the valve in the return line was left in its open position and no additional liquid carbon dioxide were introduced into the press,

(Testimony of Earl P. Wells)

that entire chamber could reach a sub-atmospheric pressure, is that correct?

A. It would tend to, but air would enter at the bottom of the block and tend to prevent a vacuum. [767]

Q. Because of the imperfect manner in which the lower platen seals the bottom of the chamber?

A. Yes; and because it is in a lowered position.

The Court: Well, you mean because of the manner in which the lower platen does not seal the chamber, don't you?

Mr. Miketta: Yes; or the imperfect manner in which it does seal.

The Court: Yes.

Mr. Miketta: Your statement was more correct, your Honor.

Q. And you open the vent to atmosphere because the reduction in pressure to a zero gauge within the chamber is more rapidly accomplished in that manner than in permitting the compressor to reduce that pressure through the return line, is that correct? A. Yes.

Mr. L. S. Lyon: I object to that as leading, your Honor, and suggestive. The witness has already in his own words stated why the operation is performed.

Mr. Miketta: I was trying to summarize his testimony, your Honor.

The Court: Well, it is rather a summary. Objection overruled. You may answer. A. Yes.

Mr. Miketta: That will be all. [768]

* * * * * * * * *

(Testimony of Earl P. Wells)

Cross-Examination.

Q. By Mr. L. S. Lyon: Mr. Wells, what was your position with the Gay Engineering Company on the 1st of January, 1940? A. I was a sales engineer.

The Court: Excuse me one minute. You had no additional questions?

Mr. Foster: No, thank you, your Honor.

The Court: I wanted the record to be clear.

Q. By Mr. L. S. Lyon: What instructions did you receive from your superior with reference to what your duties were to be and what your responsibilities were to be in connection with this revamping of the plant of the Natural Carbonic Company at Niland?

A. My duties were to increase the capacity of the existing plant by increasing its efficiency with alterations to the equipment.

Q. When were those duties first assigned to you? [769]

A. Oh, they were not exactly assigned to me. It was a sales effort of my own, but the negotiations for the contract were begun in about January, 1940.

Q. And how long did you have the matter in process before any actual physical changes were undertaken at the plant at Niland? A. About two months.

Q. During that time did you call on Dr. Charles Jones who is here in the courtroom and who has been a witness on the stand here? A. No.

Mr. Foster: Objected to as immaterial.

Q. By Mr. L. S. Lyon: Did you call on Dr. Charles Jones in 1940? A. In the fall of 1940, I believe. [770]

(Testimony of Earl P. Wells)

Q. By Mr. L. S. Lyon: What was the purpose of you calling on Dr. Jones on that occasion? [771]

* * * * * * * * *

A. I had two reasons for calling on Dr. Jones, who was then in the research department of the Continental Can Company, engaged in work in connection with dry ice. One of them was to hear his background upon the matter of these patents held by International Carbonic, because about September of 1940 I first learned that these patents were in existence and it seemed strange to me that none of the—or, most of the dry ice companies operating in the west were not paying royalty to the International Carbonic Company and were not notified of infringement. I had a client who was contemplating investing in another dry ice plant, and he asked me to go east to investigate the patent situation. And I had a second reason for wanting to get some information about crystalin growth in dry ice.

Q. By Mr. L. S. Lyon: And following your meeting with Dr. Jones did you go on to New York and call on Mr. Harry Cole who is here in the courtroom?

A. Yes. [773]

* * * * * * * * *

Q. By Mr. L. S. Lyon: What was your purpose in so calling on Mr. Cole?

* * * * * * * * *

A. It was the same reason, to find out the position of International Carbonic in the patent field and to determine for myself how important the patents were as affecting future plants which we might build.

(Testimony of Earl P. Wells)

Q. At that time had you read the patent involved in this suit?

* * * * *

A. I had read the Cole and McLaren patent only for the first time in about October, 1940.

Q. Can you fix the approximate time of your meeting with [774] Mr. Cole?

* * * * *

A. Approximately October, 1940.

Q. Did Mr. Cole furnish you with a copy of the form of license being offered by International Carbonic, plaintiff in this case, at that time?

* * * * *

A. Yes. [775]

* * * * *

Q. By Mr. L. S. Lyon: Can you tell us when you started the revamping of the plant of the Natural Carbonic Company at Niland?

A. Approximately April 15, 1940.

Q. 1940? A. 1940; yes, sir.

Q. How long did your work in revamping that plant continue, over what period of time?

A. The new plant was put into operation on May 9th, but additional work continued for another month or two.

Q. You say the new plant; will you tell us what the difference was in the new plant as compared with the plant before you undertook your work on it?

A. We installed, or my company installed additional compressors to practically double the output of the plant, in addition to revamping the original plant.

(Testimony of Earl P. Wells)

Q. And at that time, the plant as revamped by you and put in operation, included a compressor system and two of these Frick apparatus, is that right?

A. Yes. The two Frick presses were in existence when we started to work.

Q. By The Court: You mean they were on the job?

A. Had been in use for many years.

Q. By Mr. L. S. Lyon: You have referred to this Exhibit I, [776] the colored diagram. Did you prepare this exhibit yourself? A. No; I did not.

Q. Are these legends on this exhibit yours, or were they put on the exhibit by somebody else?

A. By whoever made the rest of the diagram.

Q. When did you first see this exhibit?

A. In its present form, today. However, I saw early sketches of these figures, separately, about ten days ago.

Q. Did you prepare those original sketches?

A. No; I did not.

Q. Do you know who did? A. No.

Q. Did you furnish the information for them?

A. No; I did not.

Q. Referring to Fig. 2 on this Exhibit I, what is meant by the word "snow" in the legend reading "snow formation with gas released"?

A. Well, I think that means that as the gas is released the snow is formed simultaneously.

Q. By that, do you mean—

The Court: Let us see. I think that the question was improper in form. I think what you should ask him is this: In his answers to his questions what did he understand the meaning of those words to be, rather than what the meaning actually was, which, of course, he manifestly

No. 11054

IN THE

United States Circuit Court of Appeals

FOR THE NINTH CIRCUIT

INTERNATIONAL CARBONIC ENGINEERING
COMPANY,

Appellant,

vs.

NATURAL CARBONIC PRODUCTS, INC., a corporation,
GEORGE PEPPERDINE FOUNDATION, a corporation,
L. H. POLDERMAN, W. L. BENSON and C. B. BENSON,
individually and as a copartnership doing business under the fictitious firm name and style of Natural Carbonic Products,

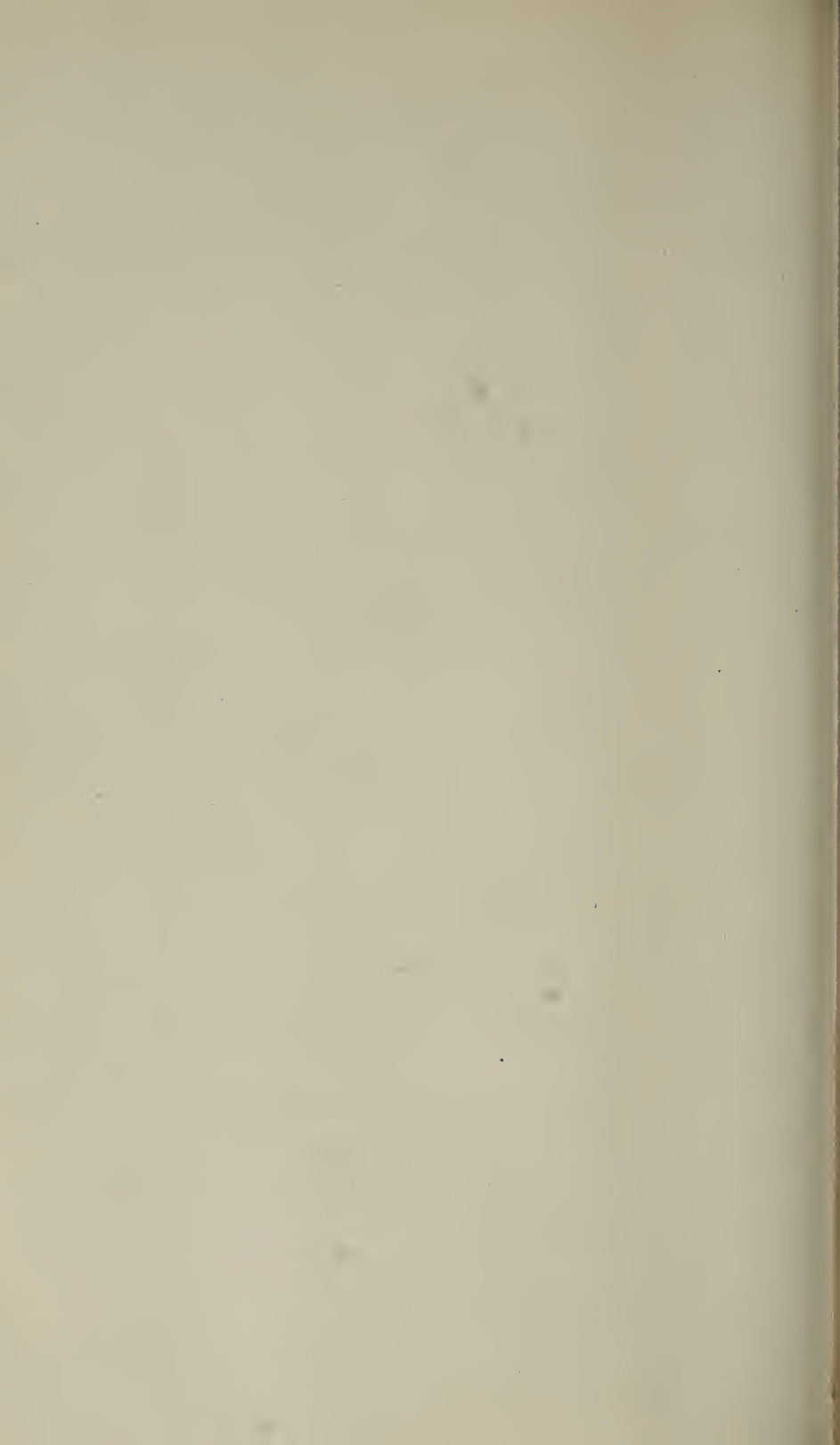
Appellees.

TRANSCRIPT OF RECORD

VOLUME II

(Pages 423 to 870 Inclusive)

Upon Appeal from the District Court of the United States
for the Southern District of California,
Central Division



No. 11054

IN THE

United States Circuit Court of Appeals

FOR THE NINTH CIRCUIT

INTERNATIONAL CARBONIC ENGINEERING
COMPANY,

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vs.

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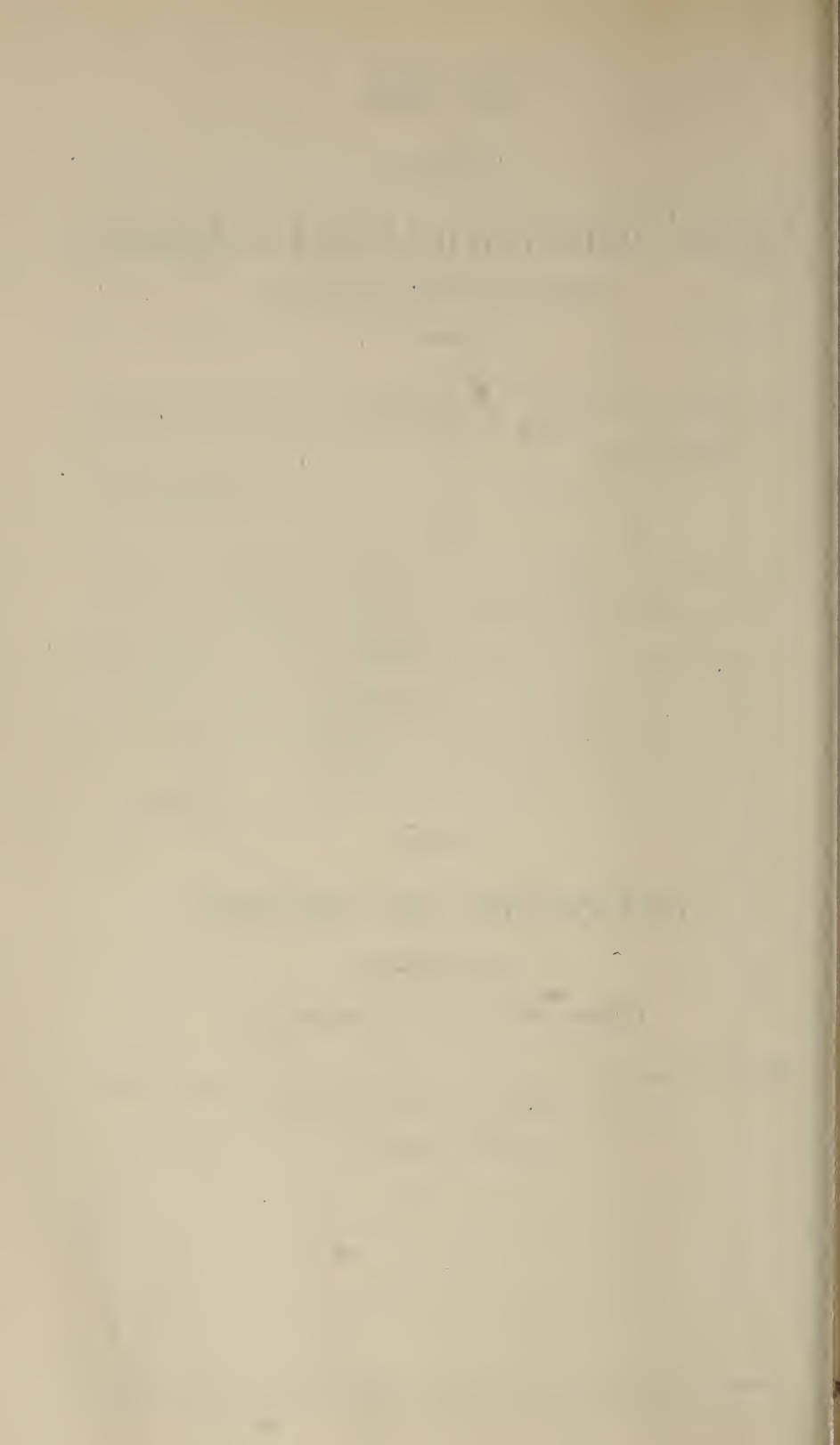
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(Testimony of Earl P. Wells)

could not tell because he does not know. May that substitution be made? [777]

Mr. L. S. Lyon: Yes, certainly, your Honor.

The Court: It is totally a technical matter, but it might interfere with your record.

Mr. L. S. Lyon: The only thought I had, the witness was asked if this diagram was correct in all respects, and I supposed that to include the legends.

Mr. Morris: The Judge has ruled that it does.

The Court: Yes; it does, but it is what he understood by his testimony.

Mr. L. S. Lyon: Yes; I understand.

The Court: You get that by his testimony.

Mr. L. S. Lyon: I will reframe the question.

The Court: No; it is all right. It is in the record.

Q. By Mr. L. S. Lyon: Do you mean by your last answer—

Mr. Morris: The Judge has asked your question and the question is pending.

Mr. L. S. Lyon: Is there a question unanswered?

Q. By The Court: Is that what you meant by your testimony?

A. Yes. I had in mind and realized in answering my question that there was two types of operation on that snow formation, above and below the triple point.

Q. By Mr. L. S. Lyon: As you have observed the commercial operation of the defendant at the Niland plant since 1940 has it included both types of operation, both the snow forming below the triple point and the ice operation above the triple point? [778]

A. I have seen the press operated in both manners; yes, sir.

(Testimony of Earl P. Wells)

Q. I mean as far as you can speak for the commercial operation, have they employed both types of operation commercially?

A. I can't testify as to the amount of time spent in operating under either method of operation. [779]

* * * * * * * * *

Q. By Mr. L. S. Lyon: You have stated that you observed both types of operation at the defendants' plant at Niland. What I would like to know is did you observe those being operated experimentally or in the regular conduct of the plant?

A. When I was at the plant last month they were operating above the triple point, and I made a record of the pressures in normal operation, as I requested the operator to make some ice in his normal manner so that I could record the pressures. In February of 1943 I recorded some pressures, and at that time the company was investigating the effect upon snow structure of various methods of operation. It was an experimental period in which they would make ice for a week under one condition, and then another week under another condition, so as to give time for that ice to reach the market and to get the market's reaction to it. To that extent it was an experimental period.

Q. In so far as you know of the regular operation in the defendants' plant as distinguished from any specially conducted demonstrations or experiments, which type of operation has been employed?

A. Well, all I can—

Mr. Miketta: Objected to as indefinite and ambiguous, your Honor. [780]

The Court: Read that question, please.

(Question read by the reporter.)

(Testimony of Earl P. Wells)

The Court: I presume you mean by "regular operation" the operations that he had observed during his visits?

Mr. L. S. Lyon: That is correct.

The Court: With that understanding, you may answer the question, if you can.

A. I did not particularly note the pressures in the press, except in connection with certain investigations which were made at different times for different purposes; and I have not usually inquired as to their normal method of operation. However, last month I was informed by the plant manager that for the past—

The Court: No, no, no.

Mr. L. S. Lyon: We can't have that, Mr. Wells.

The Court: That is mere hearsay that I struck out so violently a few moments ago.

Q. By Mr. L. S. Lyon: Did you keep a record of each of your visits to this plant during the years beginning with when you started your work on revamping it and up to the start of this trial? A. Yes.

Q. So you have a record by which you can tell us and give us the dates of each of your visits? A. Yes.

Q. Have you got that record with you? [781]

A. No; not with me.

Q. Will you bring that in Tuesday, if you can?

A. I can.

Mr. Morris: Will you read the answer, please?

(Answer read by the reporter.)

Mr. Foster: So he may be sure, your Honor, is the request for a record of the dates of the visits, or the records made on each trip? May I have that question, the next to the last question, if the court please?

(Record read by the reporter.)

(Testimony of Earl P. Wells)

Mr. L. S. Lyon: I understand the witness is entirely willing to comply with my request and that no order of the court is necessary, your Honor.

The Court: He has agreed. All you have asked him for is the dates.

Mr. L. S. Lyon: That is all I have asked him for in this question, was the records that show the dates.

The Court: Yes.

Mr. L. S. Lyon: And I think I have already asked the witness if he will bring the records that he has in so far as they show any of the operations at the plant in question. If they are just estimates of costs of equipment or labor or things like that, I do not want to burden you with bringing those in. I am only interested in any records you have that show the actual operations there.

Mr. Miketta: Actual operation of the snow press, your [782] Honor, but not of the compressing system and all the other machinery that is in the plant.

Mr. L. S. Lyon: In so far as any of your records reflect pressures of your equipment being operated, I would like to include those records.

The Court: Yes.

The Witness: I have confidential information interspersed with those records in this book and I would probably need to review the entire record.

Mr. L. S. Lyon: I am sure I do not want any of that

The Court: Well, you may just reveal it as you are called on for certain specific information, from your records, and they will take care of that.

Mr. Foster: Would it be agreeable, in the light of the witness' last statement, if the pages were photostated or isolated in some way and those given to Mr. Lyon?

(Testimony of Earl P. Wells)

The Court: Yes; I think that would be satisfactory.

Mr. Foster: I do not wish to embarrass anyone.

The Court: If counsel does not object to the photo-static copy.

Mr. L. S. Lyon: I do not expect to offer all these records into evidence. I just expect the witness to testify from them.

Mr. Morris: I wonder if the books could be brought in or the records and be shown to your Honor, and your Honor let us have what is not confidential. [783]

Q. By the Court: How voluminous are they?

A. Not voluminous, your Honor.

The Court: All right; bring them in and I will look them over.

Mr. Morris: Very good.

Q. By Mr. L. S. Lyon: Can you remember which type of operation was adopted when the revamped plant was first placed in use?

The Court: As between the triple point and the snow?

Mr. L. S. Lyon: Yes, your Honor.

A. No; I can't recall just how the press was operated at that time, because my contract did not concern the press.

Q. Were you ever concerned with the operations of these presses, so-called, at this plant?

A. After the plant was in operation for a period, I helped to conduct some experiments to study the effect of pressures on ice structure with the Frick presses.

Q. And when was that?

A. That must have been about August, 1940. [784]

(Testimony of Earl P. Wells)

Q. By Mr. L. S. Lyon: Do you have any knowledge of the results obtained with the operation of the revamped plant when it was placed in operation?

The Witness: Will you read that question to me, please?

(Question read by the reporter.)

A. Yes.

Mr. Miketta: It is vague and indefinite, your Honor, as to what is meant by the plant. There are a great many things in that plant that have no bearing on this case.

The Court: I think he meant by "plant" these Frick presses that they were experimenting with. Is that correct?

Mr. L. S. Lyon: Yes; including the gas cycle with which they are operated.

The Court: That is right. Your answer is "yes" to that? A. Yes.

The Court: Very well.

Q. By Mr. L. S. Lyon: How did you obtain that knowledge? [785]

A. Well, I was there when the plant was put into operation and I saw the results of the operation.

Q. How long did you remain there?

A. I was at the plant during the entire construction period and there most of the time during the following two months.

Q. Of its operation? A. Of its operation.

Q. And what was your purpose in being there? What were your duties or responsibilities in connection with that?

A. To test the equipment and remove difficulties of operation and minor mechanical matters.

(Testimony of Earl P. Wells)

Q. Do you know whether or not any difficulties were experienced in the operations, particularly of the apparatus for solidifying and pressing the dry ice or the associated gas compressing equipment?

A. No; there was no difficulty experienced with the press. The press had been in use for many years and its operation was fairly well established.

Mr. L. S. Lyon: I move to strike out the statement that the press had been in use for many years, as volunteered.

The Court: That portion may be stricken and the balance may stand.

Q. By Mr. L. S. Lyon: What was the occasion for this experimental work that was carried on in August, 1940?

Mr. Foster: That is objected to as no foundation.
[786]

Q. By Mr. L. S. Lyon: If you know?

The Court: Objection sustained as being immaterial.

Q. By Mr. L. S. Lyon: What was the experimental work that was carried on in August, 1940?

Mr. Foster: Objected to as immaterial.

Q. By Mr. L. S. Lyon: What experiments were conducted?

The Court: Objection sustained.

A. The pressures in the press were varied, the time cycles were varied, and some changes were made or variations made in the purification apparatus of the plant.

Q. By Mr. L. S. Lyon: Did you participate in the planning or conducting of those experiments?

A. Yes.

Q. As a result of those experiments were any changes made in the operation of the solidifying and press ap-

(Testimony of Earl P. Wells)

paratus, either as to the pressures or the times involved in such operations? A. No.

Q. At that time was the regular operation a snowing operation or a triple point operation?

Mr. Foster: Objected to as indefinite in the use of the word "regular."

Mr. L. S. Lyon: Well, I think we know what that means.

The Court: Read that question, please.

(Question read by the reporter.)

The Court: By that time, you mean this period during [787] these experiments, do you?

Mr. L. S. Lyon: That is correct.

The Court: This period during experiments.

Mr. L. S. Lyon: That is correct.

The Court: The objection will be overruled.

A. Well, I should say that during that experimental period there would be no regular method of operating the plant. However, in the plant the men who were operating the press were former employees of the previous owner of the plant.

Mr. L. S. Lyon: I move to strike that statement as volunteered.

The Court: That portion may be stricken. Just tell us what you did as far as operation was concerned. You say you did not conduct regular operations; they were experimental operations during that time? A. Yes.

[788]

* * * * *

Q. Do you know what pressures and times were employed in the operation of the solidifying and pressing equipment in that plant beginning with the placing of the

(Testimony of Earl P. Wells)

plant in operation following its revamping and up to the termination of this experimental work that was conducted in August, 1940?

A. Well, the pressures were maintained both above and below the triple point during that period.

Q. Then, the operation of the plant in so far as the pressures were concerned was irregular?

A. Yes, sir.

Q. During that period?

A. That is right. The various operators had different ways of operating and there was considerable disagreement as to how the press should be operated.

Q. And that included some operations of what we call the snowing type as distinguished from the triple point type? A. Yes.

Q. And, on the other hand, included some operations of the triple point type? A. Yes.

Q. Can you tell us when, if you know, a regular operation was adopted in that plant? [789]

A. I can't recall what press pressures were maintained following that period, because the results of our experiments were not directed or did not—were not affected by the pressures in the press. We found that we had to make some changes in the purification apparatus, which took care of our difficulties, and that the pressures in the press were immaterial.

Q. Well, ultimately, a regular operation was adopted, was it not?

A. Yes; as regular as the previous operation had been under the previous owners, which was—

Mr. L. S. Lyon: I move to strike that statement out as volunteered.

(Testimony of Earl P. Wells)

The Court: Yes; that may be stricken. Explain it, rather, as what was actually done.

A. At that time the plant made two kinds of ice, above and below the triple point, or at least the majority of the operators favored that method of operation, whereby they would make triple point ice in the summer-time when the customers were less critical, because they could make greater production; and in the wintertime they made ice below the triple point because it was finer texture and more easily sawed and had better keeping qualities.

Q. By Mr. L. S. Lyon: How long did that practice continue, to your knowledge?

A. I can't state, to my knowledge, because I did not [790] remain at the plant after that time.

Q. And you are now referring to what date?

A. Following August, 1940.

Q. You have had no regular connection with the plant since that time?

A. As a consultant I have visited the plant several times and have done some minor work there, but in connection with other parts of the plant.

Q. You have acted as a consultant for that plant since what date? A. Since the plant was rebuilt.

Q. What has been included within your activities as a consultant?

Mr. Foster: Objected to as immaterial.

Q. By Mr. L. S. Lyon: What has been the nature of the advice or your participation in the operation of that plant?

The Court: Objection overruled.

A. I have worked on any specific problems that were assigned to me by the owner.

(Testimony of Earl P. Wells)

Q. By Mr. L. S. Lyon: Have you been consulted at any time with reference to the pressures that should be employed? A. No.

Q. Have you been consulted at any time with reference to the order of manipulation of the solidified and pressing apparatus? A. No. [791]

Q. You have had nothing to do with the pressing and solidifying apparatus?

A. Only to the extent of its effect upon the rest of the system, that is, the rapidity with which the gas is withdrawn from the press and returned to the rest of the system, and its effects upon the pressure in the system.

Q. You have stated that the apparatus there is equipped with pressure gauges. Will you tell us how many pressure gauges and where they are located?

A. The H. P. M. press has a gauge connected to the chamber, the upper part of the chamber, and the same is true of the two Frick presses. [792]

Q. One gauge?

A. Each press has its own guage.

Q. And that is the only gauge by which you can measure the pressure in the press? A. Yes.

Q. Will you relate whether or not any predetermined pressure is maintained in that plant to your knowledge? I refer by "plant" to the solidifying chamber.

Mr. Foster: Objected to as indefinite in the use of the word "predetermined".

The Court: I don't think it is indefinite if he can answer it. It is a compound question, of course. You might break it up. So far as you know, is a constant pressure maintained in the gas chamber in these devices?

A. No, no constant pressure is maintained. It is extremely variable.

(Testimony of Earl P. Wells)

Q. Is that true of the triple point operations?

A. Yes, there is no effort to maintain any pressure in the press during the triple point operation.

The Court: Any minimum pressure?

A. Until the point of pumping out has been completed and the gas is vented at 5 or 10 pounds.

Q. By Mr. L. S. Lyon: You have personally observed the gauge on these different apparatuses during the boil-out period, have you? A. Yes. [793]

Q. What does the gauge show?

A. It stands at practically 60 pounds gauge during the liquid boiling phase.

(Short recess.)

Q. By Mr. L. S. Lyon: Mr. Wells, is Exhibit I equally correct for either the snowing operation or the triple point operation, as it was employed in the plant at Niland, during the time we have been inquiring about?

A. In Figure 2 it would not be correct for triple point operation, because the snow formation does not take place until after the liquid valve is closed.

Q. Are there any other differences as to either operation? A. No, I can see no others.

Q. Will you refer now to Figure 1 of Exhibit I. That illustrates the apparatus at the commencement of a new cycle; is that correct? A. Yes.

Q. What would the pressure gauge read at that stage?

A. Zero.

Q. Referring now to Figure 2, that illustrates the apparatus during the inlet of the liquid CO₂; is that correct? A. Yes.

Q. And the legend "snow formation with gas release" would apply only to a snow type of operation, would it not? [794] A. Yes.

(Testimony of Earl P. Wells)

Q. And in the snowing operation, as practiced at that plant, how long would the liquid delivery continue? Over what period of time?

A. In the H. P. M. press a matter of five minutes. It varies. If I may refer to my diagram. Yes, I should say five minutes.

Q. What would be the reading on the pressure gauge during that time?

A. That would depend upon what pressure the operator might wish to maintain, or it might depend upon the number of compressors connected to the flowback line. At the Natural Carbonic Products plant, when they are making ice below the triple point, they do not attempt to maintain any particular pressure in there, or a steady pressure, but they do have this pressure to 60 pounds. If they have two compressors connected to the return line it is just a matter of proportion between the liquid inlet and the gas outlet.

Q. From your observation, what was the reading of that gauge during that period?

A. At what time is that?

Q. During the inlet of the liquid CO₂? We are talking now about the Frick press, as I understand it, operated in accordance with the snowing operation.

A. Well, my only observations of the press when [795] steady pressures were maintained in there were during experiments which I made. At other times I have seen pressure within the range of 40 to 55 pounds during the snowing period, just as a casual observation, however.

(Testimony of Earl P. Wells)

Q. You haven't made any studied observations of the pressure at this stage of the operation of the Frick press; is that correct?

A. Do you mean studied observations of the normal method of operation?

Q. Yes.

A. No, they were merely casual, because I was not concerned with the operations.

Q. Can you answer as to the H. P. M. press, how long a time is taken up in the running of the liquid CO₂ into that press?

A. The five minutes that I mentioned was for the H. P. M. press.

Q. Will you answer as to the Frick press?

A. In the Frick press the snowing time is approximately a minute and a half.

Q. What was the pressure indicated by the gauge during that time, in the regular operation of those presses, as you observed it?

A. I can't recall, because those presses have been used very little since the H. P. M. press was installed, in 1941. [796]

Q. Can you explain more definitely what you mean by "very little"? Has it been some time since they were operated, or what do you mean by very little?

A. I mean I made a few observations some time ago, in 1939.

Q. We are not interested in 1939. We are trying to find out since this plant was revamped, how much have the Frick presses been used, or what do you mean by the term that they have been used very little?

(Testimony of Earl P. Wells)

A. The H. P. M. press has been used in place of the Frick. The Fricks were used for peak load conditions, and usually when I was not at the plant.

Q. How long has it been since you have actually observed the employment of the Frick presses in regular operation? A. I would say the summer of 1940.

Q. Referring again to Figure 2 of Exhibit I, and the H. P. M. press, how long is the feeding period or time when the press is being operated in accordance with the snowing operation?

Mr. Miketta: That is objected to as having been asked and answered before.

Mr. L. S. Lyon: I will amend the question. I think that is right, your Honor.

Q. In accordance with the triple point operation?

A. About three minutes. [797]

Q. What does the pressure gauge read during that operation?

A. That varies from 65 to about 75 pounds, during my observations.

Q. During the feeding of the liquid CO₂ into the solidifying chamber? A. Yes.

Q. During that period there is no snow formation in the chamber; is that correct?

A. Substantially none, yes.

Q. During that period what is the position of the valve which bears the legend "Return" in Figure 2?

A. That is open; wide open.

Q. What is that return line connected to?

A. To the pumping-out compressor.

(Testimony of Earl P. Wells)

Q. What is the back pressure on this line?

A. The line is quite large, and the pressure at the suction of the compressor is probably three pounds lower than in the chamber, due to the friction in the line.

Q. What stage of the compressor?

A. What stage in the operation?

Q. Is this a single or multiple stage?

A. A single stage compressor, pumping up to 110 pounds, approximately.

Q. Passing to Figure 3, my questions are going to be directed to the H. P. M. press, in view of your testimony, [798] how long does the apparatus remain in the position shown in Figure 3, in the case of a snowing operation?

A. Approximately two minutes.

Q. What is the pressure indicated on the gauge during that operation?

A. The pressure continues to fall from the time the liquid valve is closed until it reaches five or ten pounds and the vent is opened.

Q. How long a period does that drop take?

A. About two minutes.

Q. Can you answer the same questions as to Figure 3, applied to a triple point operation?

A. Yes. That period requires about four minutes.

Q. What does the pressure gauge show during those four minutes?

A. It drops from triple point of about 60 pounds to five or ten pounds, when the vent is open.

Q. Which one of these figures represents the position of the apparatus during the boil-out period in a triple point operation?

A. None of these figures shows that. Pardon me; Figure 3.

(Testimony of Earl P. Wells)

Q. During the boil-out period the gauge indicates the pressure of 60 pounds, doesn't it? A. Yes.

Q. During that period the pressure doesn't drop, [799] and the drop begins with the end of the boil-out period; isn't that right? A. Yes.

Q. Is any change made in the apparatus at all at the end of the boil-out period?

A. No; everything remains the same.

Q. Throughout the boil-out period?

A. The pump-out.

Q. And during the period of drop of pressure to five or ten pounds, the point you have indicated?

A. That's right; no change.

Q. Then what is done in the triple point operation, in that plant?

A. When the pressure is five or ten pounds the vent is open.

Q. And the blowout valve closed? A. Yes.

Q. What is the purpose of the blowout valve at that time?

A. To prevent air from entering the vent line and getting into the compressor.

Q. In a snowing operation what is taking place when the apparatus is as shown in Figure 4?

A. The snow is resting on the lower platen, and the pressure in the chamber is zero pounds. Snow and gas are escaping around the platen. [800]

Q. What was the purpose of dropping the platen from the position shown in Figure 3 to the position shown in Figure 4?

A. One reason is to relieve any dangerous pressures in there during—

Q. What—

(Testimony of Earl P. Wells)

Mr. Foster: Just a minute. The witness hasn't finished his answer. I think he should be given an opportunity to do it.

Mr. L. S. Lyon: You may proceed. I did not mean to interrupt you.

A. It is to relieve gas pockets at the bottom of the pile of snow so that when the plunger comes down it will not cause gas pockets which later might explode and injure the operator on opening the press.

The Court: It is just an extra vent, conveniently located? A. Yes.

Q. By Mr. L. S. Lyon: How big is this vent line to the air? What is the diameter?

A. I don't know the exact size, I should judge about an inch or an inch and a quarter.

Q. How far out does it extend from the apparatus before it takes its upward course that you have described?

A. About a foot.

Q. Then how far does it extend? [801]

A. About six feet.

Q. Is that above the top of the chamber?

A. Approximately close to the top of the hydraulic chamber.

Q. But above the top of the solidifying chamber?

A. Yes, about six or eight feet.

Q. Have you observed what takes place in the operation of this H. P. M. press when the lower platen is lowered, as indicated in Figure 4 of Exhibit I?

A. Yes.

Q. What happens?

A. There is an increase in the amount of gas leaking out there.

(Testimony of Earl P. Wells)

Q. In effect you just crack that seal, and some gas escapes; is that right?

A. Yes, there is a visible quantity of it.

Mr. Miketta: I object to the question as leading, and assuming facts not in evidence.

Mr. L. S. Lyon: I intended it to be leading, on cross examination.

The Court: Read the question, please.

(Record read by the reporter.)

The Court: Objection overruled.

Q. By Mr. L. S. Lyon: Is that true of the effect of dropping the lower platen slightly, as shown in Figure 4, Exhibit 1, both in the snowing operation and in the triple [802] point operation?

A. Yes, it is the same operation.

Q. After the pressure has dropped down to about five or ten pounds, and you have opened the vent to the air, as shown in Figure 4, then thereafter the return valve remains closed and the vent to the air remains opened for the remainder of the cycle; is that correct?

A. It remains open until the point where the lower platen is lowered to remove the ice.

Q. And at that time the vent to the air valve is closed; is that correct? A. Yes.

Q. What is the purpose of doing that?

A. It is to prevent the inlet of air, moist air, when the platen is dropped, and it also permits a little accumulation of gas above the ice block, which helps to push it down onto the lower platen for removal. It is also preparatory to starting the next cycle.

Q. In the operation of this press how is the block ejected, or caused to leave the chamber?

(Testimony of Earl P. Wells)

A. My guess is that it drops by gravity when the friction between the block in the chamber is decreased by sublimation in the snow and surface of the block. However, if the operator is in a hurry he can force the block to drop, overcoming the friction by exerting the gas pressure above the block. [803]

Q. Is it possible for him to apply further pressure from the upper plunger to force the block down out of the chamber, to release it?

A. I have never seen them use the upper plunger for pushing the block out.

Q. From your knowledge of the machine, can it be so used? A. Yes.

Q. You have said, in one of your previous answers, something about a guess. Why did you use that expression? Are you not sure of your answer?

A. I have no way of knowing the exact amount of friction between the block and the chamber, nor the amount of heat entering the block from the chamber walls, as to whether it would sublimate that gas to ice in a sufficiently short time to reduce the friction.

Q. Have you observed whether or not it is necessary to pause in the operation when you are ready to discharge the block from this press, to allow for some time for the block to unfreeze?

A. Yes, there is a matter of perhaps 15 seconds there between the time when the lower platen is dropped three inches, let's say, and the block drops down to it.

Q. So the fact is that when the apparatus is in the position shown in Figure 7 of Exhibit I, the block is frozen in the chamber; is that right? [804]

A. I wouldn't use the word "frozen". I would say it is bound in there by friction.

(Testimony of Earl P. Wells)

Q. Bound to the side walls? A. Yes.

Q. Is that true, whether the operation is a triple point operation, or a snowing operation?

A. To my knowledge, yes.

Q. In the operation at this plant of the H. P. M. press, is the platen lowered substantially away from the press before the block is freed, so that the block falls a substantial distance onto the bottom platen, or is the platen lowered as the block comes out of the chamber?

A. The platen is held at a point where the top of the boss is about a half an inch below the chamber, so that the operator can see the block fall onto the platen.

Q. How far does it fall? A. About 2½ inches.

Q. Is it then necessary to lower the platen further, carrying the block, in order that the block may come out of the chamber? A. Yes.

Q. In operation is that done?

A. Yes, it is done.

Q. And the lower platen is lowered carrying the block until the block is free from the bottom of the chamber; is that correct? [805] A. Yes.

Q. Do you have Plaintiffs' Exhibits 3 and 4 before you, Mr. Wells? A. Yes.

Q. Were those drawings made by your company?

A. No, they were not.

Q. Do you know by whom they were made?

A. Yes, judging from the initials there, WLB, it would be William L. Benson, superintendent of the plant.

Q. At Niland? A. At Niland, yes.

Q. One of the defendants in this case? A. Yes.

(Testimony of Earl P. Wells)

Q. How did that come to bear the legend of your company, do you know?

A. At the time we were building the plant I had some of our tracing paper at the plant to make drawings as the work progressed. At the close of the job I did not remove the extra paper and he apparently used it.

Q. Were you consulted at all about the preparation of these exhibits 3 and 4? A. No, not at all.

Q. When were you first consulted with reference to preparing any of the drawings or diagrams that you have produced here?

A. About April 15th I was requested to go to the [806] plant and make an inspection.

The Court: What is the question and answer?

(Record read by the reporter.)

The Court: That doesn't answer his question, I am afraid.

A. I am assuming that the visit to the plant is the preparation for the making of the exhibit.

The Court: I wanted to be sure that the relationship was in the record.

Q. By Mr. L. S. Lyon: These valves of the H. P. M. press, how is the inlet valve operated, by a turn-wheel, by a pull rope, or chain, or how?

A. It's a lever on a cock-type of plug valve.

Q. How is the return valve operated?

A. In the same manner.

Q. How is the valve that controls the vent into the atmosphere operated? A. In the same manner.

Q. Can the operator manipulate all these valves standing at the press? A. Yes.

Q. And does he do so? A. Yes.

(Testimony of Earl P. Wells)

Q. It isn't necessary to have any chains, ropes, or anything of that kind?

A. No, the levers are long enough to be within reach.
[807]

Q. Is that also true of Frick presses? A. Yes.

Q. You are sure of that?

A. Yes, except I believe in the case of the Frick press there is a hand wheel for the blowout line valve. The other two valves are of the cock type.

Q. Where is the hand wheel located?

A. On the right-hand side of the press.

Q. How close to it?

A. Within easy reach of a man's arm; on the same level. I will change that answer: About a man's head height.

Mr. L. S. Lyon: That is as far as I would like to go with this witness until we have the other records, and if it can be arranged for us to see them over the week-end, we might not have to take any of your Honor's time in regard to that.

Mr. Foster: We will try to produce them Monday and telephone you, Mr. Lyon.

Mr. Miketta: That will be perfectly agreeable.

The Court: Any redirect examination?

Mr. Miketta: Yes, your Honor, I would like to clarify a few points.

The Court: You may proceed. [808]

Redirect Examination

Q. By Mr. Miketta: Mr. Wells, you were asked regarding your consulting connection with respect to the Natural Carbonic Products Company's plant. Are you

(Testimony of Earl P. Wells)

personally employed as a consulting engineer by Natural Carbonic Products?

A. No; my company has an agreement to perform consulting functions, and contracting functions.

Q. Regarding the so-called revamping which took place in early 1940, what did that actually consist of?

A. It all had to do with parts of the plant other than the presses, consisting of changes in heat exchangers, gas driers and purifiers.

Q. It had nothing to do with the actual operation or construction of the snow presses?

A. That is correct.

Q. It only pertained to the liquefaction of the carbon dioxide and its purification, is that correct?

A. Yes.

Q. Your company is engaged in maintaining that particular equipment in efficient form?

A. No, the maintenance is performed by the plant engineers and operators.

Q. But your consulting connection pertains more directly to the purification and liquefaction parts of the plant, is that correct? A. Yes. [809]

Q. Will you please refer to Fig. 3 of Exhibit I. During a triple point operation, where the maximum pressure in the chamber is in excess of 60 pounds, is snow formed at the stage indicated in Fig. 3?

A. Yes.

Q. So that I correctly express, or I correctly identify Fig. 3 as a triple point operation, what legend would you apply to Fig. 3?

A. I would eliminate the word "continued".

(Testimony of Earl P. Wells)

The Court: I do not understand that.

A. Or you can also add the words "snow or ice formation."

Q. By Mr. Miketta: In other words, the legend applied to Fig. 2 of Defendants' Exhibit I stating "snow formation with gas release" that takes place during a snowing operation, is that correct?

A. Yes, snow forming.

Q. But after the inlet valve is closed, as indicated in Fig. 3, then during a triple point operation snow formation takes place in Fig. 3?

A. Yes, and not in Fig. 2.

Q. Were you asked to make any drawings for us in this case? A. No.

Q. You stated that lowering the platen, as shown in Fig. 4 of Exhibit I, breaks the seal with the chamber. Do you mean by that answer that prior to that time the lower [810] platen seals the chamber hermetically?

A. Not gas-tight under normal operating conditions, no.

Q. Refer to Figs. 7 and 8 of Exhibit I. Is that lower platen moved downwardly by the application of positive hydraulic pressure, or does it move downwardly by gravity?

A. By gravity, to the best of my knowledge. I am not certain about all of the hydraulic connections in that lower cylinder. That is, I mean it might be possible to drive it down with proper connection to the oil pump, but to the best of my belief it falls by gravity.

Mr. Miketta: That will be all, your Honor.

Mr. Foster: I have nothing, your Honor.

(Testimony of Earl P. Wells)

Recross Examination

Q. By Mr. L. S. Lyon: When you indicated the different legend that should be applied to Fig. 3 in the case of the triple point operation, in using the word "snow", that word would be used to indicate ice formation, would it not?

A. Yes. I don't think the word "snow" has really been defined by anyone at this trial.

The Court: Haven't we generally been talking about snow below the triple point, and ice above it?

Mr. Foster: Some of plaintiffs' witnesses, I think, did so refer to it.

The Court: Let us find out just what he meant. As I understood you, Fig. 2 was intended to refer only to the snowing operation and the pressure there would be below the [811] triple point, and on down usually from 55 down to atmosphere. In 3 you have your pressure falling to about 5 degrees in a couple of minutes, in your snowing process, but if you are working on a triple point operation you take about a minute more and run the pressure down from 60.4, or thereabouts, down to about 3 or 4 degrees, after the boiling-out period, is that correct?

A. Yes.

Q. By Mr. L. S. Lyon: Will you refer to Plaintiffs' Exhibit 4, in front of you, which is the diagram prepared by Mr. Benson of the H. P. M. press. I call your attention to the legend reading, "Gas sealing insert," at the bottom of the chamber, and the legend reading, "Sealing ring" at the top of the lower platen. Have you ever examined those in the H. P. M. press at Niland?

A. No, not carefully.

Q. Do you know what they are?

A. I don't know what material they are made of.

(Testimony of Earl P. Wells)

Q. Have you ever seen them at all?

A. Yes, I have seen the tongue and groove.

Q. What are they, as nearly as you can tell us from your examination?

A. I didn't examine them, but as I recall it, the ring is metallic, and the groove above has a gasket type of material in it.

Q. What would be the purpose of the use of those elements, [812] from your knowledge as an engineer?

A. To obtain substantial tightness.

Q. As I understand you, such a tightness is substantially obtained, but there is some leakage due to some ice formation, is that correct?

A. Yes, foreign material, and damage to the gasket materials.

Q. But substantially the lower platen is sealed against the bottom of the chamber until the lower platen is lowered, as indicated in Fig. 4 of Exhibit 1?

A. Yes.

The Court: Fig. 1 of Exhibit I?

Mr. L. S. Lyon: Fig. 4 of Exhibit I. Did I say Ex. 1?

The Court: Yes.

Mr. L. S. Lyon: Excuse me.

Q. Can you give us any idea of the amount of CO₂ gas that is escaping at the bottom of the chamber before the platen is moved to the position shown in Fig. 4, of Exhibit I? Is it a lot of gas, or a small amount?

A. It is a thin stream of gas that occurs at different parts of the platen, at different times. I don't know that there is any way of measuring it. It can be felt by pressing one's hand up there, or watching the moisture in the gas stream.

(Testimony of Earl P. Wells)

Q. By the Court: What is this seal mechanically, a kind of tongue and groove affair? [813]

A. Yes, a tongue and groove gasket.

Q. One fits down into the other? A. Yes.

Q. By Mr. L. S. Lyon: From your knowledge of the engineering aspects and operation of this H. P. M. press what percentage of the CO₂ that is fed into the chamber do you believe escapes from the chamber before the lower platen is lowered to the position shown in Fig. 4?

The Court: Under what pressure?

Mr. L. S. Lyon: If it is different, answer for the snowing operation; and if it is different for the triple point operation, answer for that.

A. I would estimate about 5 percent.

The Court: Are you averaging it now?

A. Yes; I would say that would be an average between good and poor condition of the machine.

Q. By Mr. L. S. Lyon: Have you ever measured it?

A. No.

The Court: Wait a minute. At this time of which you are speaking, the air vent is closed, is it not?

A. Yes.

Q. But the return valve is open? A. Yes.

Q. What is the relationship of the pressure in the conduit to the return valve with the valve open, and the chamber itself? [814]

A. The return conduit is practically the same pressure as the chamber, except for pipe friction, due to the flow.

Q. Two or three pounds difference?

A. Two or three pounds difference between the compressor and the press.

Q. By Mr. L. S. Lyon: You have distinguished between a good operation and a poor operation. The

(Testimony of Earl P. Wells)

amount of leakage at the bottom of the chamber in the H. P. M. press, as you have seen it at the defendants' plant at Niland, varies, doesn't it?

A. It varies with the operators, and humidity.

Q. Some of them get a better seal than others?

A. Yes.

Q. At times they get a very complete seal, do they not?

A. At the start of the day, or after the new seal has been installed, it's good for a while.

Q. Do they change this seal from time to time?

A. No, but moisture freezes on there from the air.

Q. When that happens, what is done?

A. Chunks of water ice get in between the tongue and groove and keep them spaced apart. [815]

Q. And then what does the operator do?

A. Well, he occasionally wipes it off with a cloth.

Q. What did you mean a moment ago when a new seal is put in?

A. Well, over a period of months or weeks the gasket material may become damaged and need replacement.

Q. And when it is replaced, then the seal is more absolute or perfect than after it has been operated for a time, is that correct?

A. Yes.

Q. By the Court: What is this seal made of?

A. I can't say.

Mr. L. S. Lyon: I haven't any more questions this afternoon, your Honor, and I will try to go over the witness' material before Tuesday and see if it is necessary to call him; and if it is not, why, he can be excused. But I might have some more questions, something I would like your Honor to hear, based on his records, when I see them.

(Testimony of Earl P. Wells)

Mr. Miketta: We would like to have him on those records also, your Honor.

Mr. Foster: We were reserving, as I understood, our right of examining him after observing the exhibit he had prepared.

Mr. L. S. Lyon: That is correct, that is correct. I think he will have to come back.

The Court: I think he will have to come back Tuesday [816] morning. I am sorry, but I might have something that occurs to me in the middle of the night. [817]

* * * * * * * *

EARL P. WELLS,

recalled.

The Court: Refresh me as to the present status of this witness. He is on cross examination now, isn't he?

Mr. L. S. Lyon: The matter of Exhibit J was put over until this morning, and perhaps counsel for the plaintiffs will want to continue with the Exhibit J or withdraw it, one or the other.

The Court: Yes. Suppose you do that or let them examine him on voir dire in connection with it. My recollection of it was that I sustained an objection to this J for identification on the ground that the proper foundation had not as yet been laid; is that correct?

Mr. Miketta: I think so, your Honor, basing it upon the plaintiffs' objection that the original records were not produced.

The Court: That is right. Now suppose you lay the foundation.

You have a copy of it?

The Witness: I have the original; yes, sir.

The Court: The original. [821]

(Testimony of Earl P. Wells)

Further Direct Examination

Q. By Mr. Miketta: Mr. Wells, have you been able to locate the original records from which the graphs shown on Exhibit J were made? A. Yes.

Q. And have you also gone over your records for the purpose of establishing the dates upon which you actually visited the plant? A. Yes; I have. [822]

* * * * *

Q. By Mr. Miketta: Mr. Wells, will you please check your record, and from your examination give us the dates on which you actually visited the plant at Niland, California? A. Yes.

Mr. L. S. Lyon: To save time, may I be allowed, as the witness identifies these records of the dates of his visits—may I be allowed to see the record at that time, instead of having to go over it again later?

The Court: If there is nothing of a confidential nature he wants to claim at the time, you may do so.

Q. By Mr. Miketta: Will you indicate, Mr. Wells, in checking each date, the character of the note, the correspondence, or letter which you used in establishing that date?

Mr. L. S. Lyon: I would like to have him first exclude visits in 1939, if your Honor please, upon the ground I have heretofore stated. [825]

The Court: These same machines were not in place at the same plant in 1939?

A. Some of them were, your Honor, yes.

Q. Which ones?

A. The two Frick presses were in operation in 1939, and up to date.

(Testimony of Earl P. Wells)

The Court: The motion will be denied.

A. The first note I have is a hotel receipt, which is March 18, 1943.

Mr. L. S. Lyon: May I approach the witness to just note his record?

The Court: Yes.

A. It is Hotel Planters, showing that I was at the location at that time; here is a letter dated March 26, 1943, to Natural Carbonic Products; subject: Plant inspection. March 19, 1943. The first paragraph reads—

Mr. L. S. Lyon: I don't think he should read it.

The Court: It is just for the purpose of refreshing your memory as to the date you visited the plant.

A. Letter, May 10, 1943, referring to a visit to the plant on May 4, 1943; letter addressed to Natural Carbonic Products.

Q. By Mr. Miketta: Whose letter?

A. Gay Engineering Corporation.

A sheaf of notes made during a trip to Niland, April 22 and 24, 1941; [826]

A letter from Gay Engineering Corporation to Natural Carbonic Products, dated April 28, 1941, referring to a recent trip to the plant. Apparently the exact date of that is not shown. It would be referring to these previous notes, which would be referred to in that letter;

A page of test data taken at the plant, showing various pressures, under date July 8, 1941;

Letter from the Gay Engineering Corporation to Natural Carbonic Products, dated July 10, 1941, referring to a visit to the plant on July 8, 1941;

(Testimony of Earl P. Wells)

A letter from Gay Engineering Corporation to Natural Carbonic Products, dated April 4, 1941, referring to a recent visit to the plant; the exact date is not specified;

Letter of February 26, 1942, from Gay Engineering Corporation to Natural Carbonic Products, referring to a visit to the plant on the previous day, February 25.

Then, in my diary there is an entry under June 25, in which I note: Watched operations at the plant.

Mr. L. S. Lyon: What year? A. 1941.

Q. Is that June?

A. June 25, 1941. Another entry under July 7, referring to taking the train to Brawley. That is 1941.

July 8, notation I found that the plant had been doing less than 19 tons.

Q. 1941? [827]

A. Yes, 1941. July 9, same year, notation that I repaired the discharge valves of the first stage machine.

Starting 1942, February 26 and 25, notation I drove to the plant in the evening of the 24th.

Starting 1943, notation under March 18, trip to plant; Under May 4, visit to plant.

Those are all the entries here. In addition I have—

The Court: Before you leave, you having refreshed your memory by your diary do you know that you were at the plant on the 19th of March, 1943, and the 5th of May, 1943, as well as on the 18th and 4th, respectively; that is, the following two days indicated there?

A. Will your Honor repeat the date again?

The Court: March 19 and May 5.

A. '43?

Q. '43, yes.

A. I have a notation in my book, 18th and 19th.

(Testimony of Earl P. Wells)

Q. And May 4th?

A. My notation is May 4 and 5.

Q. What about October, '42?

A. October, '42. I see nothing in my diary referring to actually spending time at the plant. It states: One day designing electric heater. That's on the 9th, but that does not state whether it was at the plant, or in Los Angeles.

Q. Do you remember now?

A. No, I can't, your Honor, prior to these dates we have been [828] checking off, '41 to '43.

Q. We haven't covered April 22 and 24, 1941.

A. April 22, 1941?

Q. And 24.

Mr. L. S. Lyon: I have that checked off in one of these earlier papers.

A. Yes. It is a group of field notes, and a letter referring to it. That remains in the summary, including the years 1939 and '40. I have this group of field notes. Here is a group of notes dated July 21, 1939: First survey, Pacific Imperial Dry Ice Company—

The Court: You need not mind reading what they say. Do they refresh your memory that you were at the plant on the 17th, 19th and 21st?

A. Yes, your Honor.

Q. What about December 1, 3 and 4, '39?

A. I have an additional group of notes indicating another complete survey at the plant.

Q. Are those dates the 1st, 3rd and 4th of December?

A. The heading sheet is dated the 4th, and the underlying sheets show 1, 4, 3; and that's all.

(Testimony of Earl P. Wells)

Q. 1940, April 23, 25, 26, 27?

A. I have a sheet dated April 25, 1940, concerning intermediate pressures at the plant, and test made at that time.

Q. Does that refresh your recollection as to what dates you were at the plant? [829]

A. Yes, your Honor.

Q. Which one? A. 25.

Q. 23 and 25, did you say?

A. I see no sheet here dated 23. Yes. Here is a sheet for 23, '40.

Q. What about the 26th and 27th?

A. Yes; another sheet of test data, with compressor data, the 26th and 27th.

Q. May 13th?

A. May 13, 1940. Yes; a group of power readings.

Q. And June 4, 12, and 14?

A. Yes; a sheet of test data from plant No. 2 showing dates 4th, 5th, and 12th.

Q. 4, 5, and 12? A. Yes, your Honor; it is 5.

Q. What about the 14th of June?

A. I don't notice the reference to the 14th just now.

Q. July 9, 10, 11, and 13?

A. Yes, your Honor. Here, I found it. It is the test sheet of compressor data, 6-14-40.

Q. July 9, 10, 11, and 13?

A. Some test data dated July 10th, 1940, and another sheet, July 9th, plants 1 and 2.

Q. 11 and 13?

A. Here is the notes under July 11th covering tests on [830] inspection of ice quality.

(Testimony of Earl P. Wells)

Q. The 13th?

A. I am unable to locate the 13th, the date 13th here.

Q. August 10 and 21?

A. Here is a test sheet of August 21st.

Q. And 10th? A. Yes; a sheet of test data.

Q. Now, then, you might refresh your memory from the various memoranda which you have indicated, and are you able to say that you visited the plant on July 17, 21; December 1, 3, and 4, 1939; April 23, 25, 26, and 27; May 13; June 4, 5, 12, and 14; July 9, 10, 11; and August 10 and 21, 1940; in March, 1941; April 22 and 24; June 25; July 8 and 9 of 1941; February 25, 1942; March 18 and 19; May 4 and 5, 1943; and April 22, 1944?

A. Yes, your Honor.

Mr. L. S. Lyon: May I ask, your Honor, if the witness could indicate at this time whether or not he knows whether the dates that are specified in the preceding question are the only dates that he visited the plant?

The Court: Well, I think that would be a matter of cross examination.

Q. By Mr. Miketta: Now, Mr. Wells, will you specifically refer to that page or pages of the notes or records to which you have referred which give pressures existing in snow chambers of the snow press? [831]

A. Yes. [832]

* * * * * * * * *

Q. By Mr. Miketta: Mr. Wells, will you please refer to records showing the pressures in the snow chambers of the [835] presses as you recorded them in 1943 or 1944?

(Testimony of Earl P. Wells)

The Court: I suppose I should say that "building up a snow man" and not a "straw man".

A. I have a notation under April 25, 1940, that snow at 60 pounds. That indicates that the liquid was being injected into the press on that day at the triple point exactly, practically, but that is—

Q. By the Court: When you refer in your notes to 60 pounds, you are just not making any distinction in the triple point; it might be 60, it might be 60.1, .2, .3, .4, .5, something like that?

A. Yes, your Honor. It is correct within a half a pound, but this was just an incidental entry and not an accurate one, because I was not concerned with the exact point involved there.

Q. By Mr. Miketta: Is there any other data pertaining to the snowing operation or the operation of the press on your record there?

A. On that date?

Q. On that date.

May I approach the witness, your Honor, and see his records?

The Court: Yes.

A. There is a notation that the blowback suction pressure was 15 pounds when it was not pumping, but other than that there is no record of the rest of the operation.

Q. By Mr. Miketta: Will you please examine the next [836] subsequent records that you have on pressures in the snow chamber and state what they disclose?

A. I have a notation dated October, 1942, a sort of a chart, showing the snowing time and pumping out time of the H. P. M. press.

(Testimony of Earl P. Wells)

Q. What was the maximum pressure during that operation?

A. There is indication 40 pounds ice. That would indicate that the operator maintained approximately 40 pounds in the press during the snowing period.

Q. And what was the length of time during which liquid was being injected into the snow chamber?

A. That was four minutes; and the pumping out period was two minutes; the pressing period was three minutes.

Q. Did you on the same date observe the operation of the Frick press? A. Yes. It shows about—

Q. What was the pressure, maximum pressure?

A. The pressure of snowing is not indicated. The snowing time was about a minute and a quarter, and the snowing and pumping out time together were two minutes.

Q. Just in order to clarify the record, I believe you stated that the H. P. M. press had a chamber that horizontally, in horizontal section, measured 20 inches by 20 inches? A. Yes.

Q. Is that correct? A. Yes. [837]

Q. What is the same horizontal section of a Frick press?

A. 10 inches by 10 inches. The block is one-fourth the size of the block in the H. P. M. press.

Q. Is there any indication on that record, Mr. Wells, as to when an air vent was opened?

A. I never made any record of that operation because it was so generally practiced in regular procedure that I did not deem it worthwhile.

(Testimony of Earl P. Wells)

Q. What additional records do you have, Mr. Wells?

A. Under the date of February 25th, 1942—I don't know whether that is in sequence or not—H. P. M. operation with plant No. 2. It reads: 11-minute total cycle, 2½-minute snow time at 70 pounds. Also blowback machine will not handle gas for snowing time under 1½ minutes without going over 70 pounds. That just shows the relation between the snowing time and the pump-out compressor capacity.

Q. Does it indicate how long it took for the pressure to drop to atmospheric in the chamber?

A. No. That is the total record.

Under date of March 9th or 19th—I can't be sure—1943, I have an H. P. M. press operation notation which says: Snow three minutes, the liquid pressure of 390 pounds, a liquid temperature of minus 40 degrees. The pressure in the press was 60 pounds for a minute and a half, and at the end of three minutes was 66 pounds.

Q. During what length of time was liquid carbon dioxide [838] injected into the press?

A. Three minutes.

Q. What was the so-called pumping-out time?

A. 1½ minutes.

Mr. L. S. Lyon: If your Honor please, I think, for orderly procedure here, we should know whether the witness is refreshing his recollection, in which case I do not think the form of examination is proper; or if he is supplementing it and has no independent recollection, I think the records themselves must be offered into evidence.

The Witness: Here is the notation of three minutes, your Honor.

(Testimony of Earl P. Wells)

Q. By the Court: In the answers to these were these notes made by you on or about March 19, 1943?

A. Yes, your Honor.

Q. And they were made immediately after you completed the inspection or the tests?

A. Sometime during the day there.

Q. Sometime during that day. And having refreshed your recollection, you are able to give us the data which you have indicated?

A. Yes, your Honor.

Q. The snowing time three minutes, the pumping-out one and a half?

A. And there is a further notation that the press was vented at 20 pounds pressure. [839]

Q. You mean 20 pounds in the compressor line?

A. 20 pounds in the press.

Q. In the press?

A. Yes, sir. The pressing operation took a minute and a half, and one minute additional to take the block out. Marked "blows out liquid line and wipes platen."

Q. What is the time of the entire cycle, then?

A. Seven minutes; and the weight of the block was 240 pounds.

Q. By Mr. Miketta: And you stated, Mr. Wells, that the record speaks of venting the chamber to the atmosphere at 20 pounds. Will you explain at what stage that was vented, and to where and from where?

A. The pressure of the press— [840]

Mr. L. S. Lyon: I don't think the witness said that the record shows that the press was vented to the atmosphere; and I don't see it on the record, and I object to the form of the examination as to what the record shows.

(Testimony of Earl P. Wells)

The Court: The objection is sustained. You ask him. The point, from the standpoint of evidence, is simply this: He may, by refreshing his recollection by those notes, tell you what happened, and you have no right to introduce those in evidence. The plaintiffs may introduce them in evidence if they wish, but you have no right to double-shot. Now ask him it in the other form: Having refreshed your recollection by those notes, or having an independent recollection, at what stage in the cycle was the pressure in the tanks opened to the atmosphere, if any?

Mr. Miketta: I adopt your question, your Honor. Will you answer, Mr. Wells?

A. After the pumping out period, the pressure in the press was vented to atmosphere.

The Court: Read that.

(Answer read by the reporter.)

Q. By the Court: Do you mean the next day?

A. No, sir; at the end of that cycle of snow making.

Q. Immediately forthwith, is that what you mean?

A. Yes, providing the pumping out is limited to pumping down to 20 pounds pressure.

The Court: I wanted the record to show what you meant. [841] I thought I understood it.

Mr. Miketta: From your recollection, as refreshed by these memoranda, will you state whether the chamber was vented before or after the initiation of a pressing operation?

A. The notes show it was after the pump-out period, and before the pressing operation.

Q. Independently of these records, was that customarily what you observed at the plant, Mr. Wells?

(Testimony of Earl P. Wells)

Mr. L. S. Lyon: I object to that upon the ground that as to the word "customarily" no foundation has been laid for it.

The Court: Leave "customarily" out, and answer the question with that out.

A. Yes. I have also notes under date of April 22, 1944.

Q. By the Court: On this same subject?

A. On the subject of snowing cycles, pressures in the presses.

Mr. L. S. Lyon: As to these examinations which were made immediately before the commencement of the trial, your Honor, I would like to object unless it be established what the character of those operations was; whether they were regular operations, or whether they were specially conducted for the purposes of this witness.

The Court: This date was what? [842]

A. April 22, 1944.

The Court: You may examine him on that point on voir dire.

Mr. L. S. Lyon: At this time, your Honor?

The Court: Yes.

Q. By Mr. L. S. Lyon: Do you know whether or not the operations which you observed at the defendants' plant, between April 22nd and April 24th, 1944, were the regular operations of the plant, or some special test that was conducted for your observation?

A. I specifically asked the operator of the press to make a block in his normal procedure, in the same manner he had been making them for weeks previously.

(Testimony of Earl P. Wells)

Q. But you had not actually been at the plant to observe the regular operation since May, 1943, had you?

A. Approximately, yes. It may have been a time later in 1943, but I can't recall it.

Q. Your only knowledge of whether or not these operations were in accordance with the defendants' regular practice, depends on whether or not the operator followed your instructions; is that correct?

A. Yes.

Mr. L. S. Lyon: That is all.

Q. By Mr. Miketta: Was the plant in operation at the time you went to Niland, in April, 1944?

A. Yes. [843]

Q. Was that operation interrupted in order to permit you to observe or take readings on the press?

A. No, I merely walked up to the gauge and started making notes. [844]

* * * * *

Q. By Mr. Miketta: Referring to curves 5 and 6, appearing on Exhibit J, Mr. Wells, will you correlate those curves with the data which appears in your records, and as to which you have just referred?

Mr. L. S. Lyon: If your Honor please, I think that is in the nature of cross examination. I think the proper method of proof would be the regular form, as to whether or not he can testify of his own knowledge, or refresh it by records which are identified, as to these values appearing in these curves.

(Testimony of Earl P. Wells)

The Court: I think the question is unfortunate in form, but I think that is what he meant. With that understanding, you may proceed.

A. My record shows that at the end of the first minute of snowing time the pressure in the press was 65 pounds; at the end of two minutes of liquid injection, the pressure was 67 pounds; at the end of three minutes the pressure was 68 pounds. The liquid injection was stopped at the end of three and three-quarters minutes; at the end of four minutes from the beginning of the injection, the pressure was 63 pounds; at the end of five minutes, 61 pounds; at the end of six minutes, 61 pounds; at the end of seven minutes, 49 pounds; eight minutes, 37 pounds; nine minutes, 12 pounds; nine and one-half minutes, 7 pounds. At this point the press was vented, the plunger was started downward, and pressing was completed at the end of ten and [845] three-quarters minutes from the beginning of the cycle. The vent was closed at eleven and one-half minutes; the block was taken out at the end of twelve minutes, and the next cycle was started at twelve and one-half minutes from the beginning of the first one. The block weighed 252 pounds. Then I have a notation that the next block was made—

The Court: For the record, refer to Exhibit J for identification, and show how you portray that cycle on that exhibit.

A. That data is shown as curve No. 6 on Exhibit—J, is it?

The Court: Yes, J for identification.

A. The pressure remains fairly level during the liquid injection period. The liquid curve is closed at the point shown; the pressure dropped approximately 61

(Testimony of Earl P. Wells)

pounds during the period of conversion from liquid to ice. Then the pressure at the end of six minutes dropped rapidly until it reached 7 pounds, at the end of ten minutes, when the vent valve was opened.

Q. By Mr. Miketta: Mr. Wells, does curve 5, shown on Defendants' Exhibit J for identification, correctly represent the recording which you took at the plant on April 22, 1944?

A. My notes do not show exact minute by minute pressure readings for that curve, but merely that the [846] maximum pressure was 75 pounds during the making of this block, and the rest of the curve was reconstructed from my experience in the matter. The maximum pressure there is partly affected by the intermediate pressure of the plant, which affects the capacity of the blowback compressor. When the blowback has to work against a higher head, it pumps at a slower rate, and therefore the pressure in the press rises higher, so these curves are merely typical, and not exact. I can construct a great number of curves by watching the blocks, one after another, as they are made.

Q. Do these curves directly reflect—

The Court: Be more specific. Do these curves 5 and 6—

Q. By Mr. Miketta: I was going to make it inclusive of all of the curves, your Honor. But, do curves 5 and 6, Mr. Wells, correctly reflect the observations which you have taken at the plant?

Mr. L. S. Lyon: That is objected to as indefinite, your Honor, particularly in view of his prior testimony, in which he has stated he has no values for curve 5,

(Testimony of Earl P. Wells)

except the 70 pounds pressure, and the rest of the curve is hypothetical.

The Court: I will ask you the direct question. I think, in so far as curve 6 is concerned, it is already answered that it was plotted from these notes. 5 is theoretical and approximate. Naturally, as there is a [847] relationship between the pressure in the compression line, and the pressure in the tank, you are going to have a variation in the top curve of 6, aren't you?

A. Yes.

Q. So you drew 5 as illustrative of the fact only; it might vary up or down, depending upon the condition in relation to those two items?

A. Yes, with the exception that the flat portion of the curve, around 61 pounds, would remain flat at that point, regardless of the maximum pressure, because of the triple point.

Q. There is the triple point, the flat line?

A. Yes.

The Court: If you are going to ask specifically as to others, do so, but I think you had better take them one at a time, because apparently he cannot answer the question as to all of them. [848]

* * * * *

Q. By Mr. Miketta: Mr. Wells, do you have records relating to curve 3, shown on Defendants' Exhibit J for identification? A. Yes.

Q. Does curve 3 correctly represent the observations which you took at the time? A. Yes.

Mr. L. S. Lyon: I think, to save objection, your Honor, we ought to follow the form of examination your Honor indicated before adjournment.

(Testimony of Earl P. Wells)

The Court: I think he will come to it gradually.

What is the maximum pressure indicated by the curve corresponding to curve 3?

A. I have a sequence of readings. At the end of one minute, of the beginning of the liquid injection in the Frick press, the pressure in the blowback line was 25 pounds; that is, at the compressor. At the end of a minute and a half the pressure was 27 pounds; at the end of two minutes it was 17 pounds; at the end of three minutes it was 4 pounds, and then the vent was opened, and the pressure dropped to zero. The liquid injection lasted for a minute [849] and a half, and the pump-out period lasted a minute and a quarter. Pressing required one and three-quarter minutes, making a total of four and one-half minutes. To these pressures I added approximately two or three pounds to give the pressure at the press chamber, because previous experience had shown there was that pressure drop in the line, and because the gauge on the press was broken.

The Court: It was a matter of friction?

A. Yes, friction, your Honor. The block weighed 45 pounds in removal.

Q. By Mr. Miketta: Do you have records corresponding to curves 1 to 2? A. Yes.

Q. Will you refresh your recollection by examining those records, and indicate whether or not curves 1 and 2, shown on Defendants' Exhibit J, correctly reflect the data which you recorded at the time of your observations?

A. The record shows that a block of ice was made at 30 pounds in the press. The liquid injection period, snowing time, was one and one-half minutes; the pumping time was one minute, and four minutes were required for the complete block.

(Testimony of Earl P. Wells)

Q. On what press was that operation?

A. That was the Frick press. Also on the same press triple point ice was made, with a liquid injection period of one and one-half minutes, pumping time one [850] and one-quarter minutes, or a total of three minutes.

Mr. L. S. Lyon: May I ask which curve that is?

A. Curves 1 and 2.

Mr. L. S. Lyon: I can't identify the last operation on those curves, the pumping time, your Honor.

The Court: I am a little confused about that. Will you read the answer?

(Record read by the reporter.)

Q. By Mr. Miketta: In the first part of your answer did you refer to curve 2, or is that a duplicate of curve 2?

A. The 30 pounds ice is indicated in curve 2; the triple point ice is indicated in curve 1.

Q. What was the maximum pressure reached in making triple point ice, as shown on curve 1?

A. The record shows triple point ice snowed below 75 pounds until the last five or ten seconds; then liquid was dumped in to give a hard cake. That was indicated by a little rise in the curve at the 75-pound point.

Q. Do these curves 1 and 2, correctly reflect your observations? A. Yes.

Mr. L. S. Lyon: That calls for a conclusion, your Honor. I think the record should speak for itself. I notice the record shows, at the time of this operation, with the 30-pounds ice, four minutes, and the curve seems to [851] stop short of three minutes; and the time for the triple operation is stated to be three minutes, and here it seems to stop short of two minutes.

A. The discrepancy is due to the time required to press the block.

(Testimony of Earl P. Wells)

The Court: I understood he was combining the pressing time with the balance of it. Those are not depicted on the curve?

A. The three and four minute periods are not shown on the curve.

Q. By Mr. Miketta: In other words, the curves do not show the time required to press the material after venting the chamber; is that correct?

A. Yes, you take the snow, one and one-half, and one minute for the 30 pounds block and you get two and a half minutes, which the curve shows correctly as the maximum time.

Q. Do you have a record corresponding to curve 4, shown on Exhibit J?

A. I have been unable to locate that sheet from which I made that curve. I had a group of test data under the year 1943, but I found later it included some 1942 data, and the closest data that I could refer to for that curve is the data sheet marked October, 1942, which shows ice being made at 40 pounds instead of 38 pounds, as shown on the graph. [852]

Q. What is the snowing time on that record?

A. The snowing time is shorter in the October, 1942, record than on the graph.

Q. What is the length of time?

A. The data shows four minutes, while the curve shows five and one-half minutes. The data shows two minutes pump-out period, which the graph shows about a minute and a half. This curve, however, is typical of the operation of that sort where the curve shows flat and straight at the top. Actually they are fluctuations, as the operator manipulates a *curve* to maintain the pressure as nearly constant as practical.

(Testimony of Earl P. Wells)

The Court: Sketch October on Exhibit J.

A. On your copy?

The Court: The one in evidence.

Mr. L. S. Lyon: I understand curve 4 does not correspond to any data as in October.

The Court: Ignore that one. I want to get the right one, which he testified to, unless during the course of the trial he is able to find these notes.

Q. By Mr. Miketta: Will you number that curve you have just applied to the exhibit?

The Court: Mark it 4-A.

Q. By Mr. Miketta: Mr. Wells, do these various curves, except No. 4, represent operations which are typical or characteristic of observations which you took at various [853] times on your visits to the plant?

A. Yes.

Q. Will you please examine Defendants' Exhibit H for identification—

The Court: Just a minute. This had better be admitted into evidence as Exhibit J, for the purpose of illustrating the testimony of this witness.

[Note: Defendants' Exhibit J will be found in the Book of Exhibits at page 1368.]

Mr. Miketta: May I hand this to the witness, your Honor?

The Court: Yes. [854]

* * * * * * * *

Q. By Mr. Miketta: Mr. Wells, did you make that drawing? A. No.

(Testimony of Earl P. Wells)

Q. When did it come into your possession?

A. In 1939, from the Pacific Imperial Dry Ice Company.

Q. Have any changes been made to that drawing since that time? A. No.

Q. Can you state whether that drawing correctly represents the Frick presses which you have observed at the plant of Natural Carbonic Products Company in Niland?

A. It is the same in all general particulars. There have been a few slight modifications made, such as the substitution of leather washers for piston rings in the upper hydraulic cylinder.

Q. Will you identify the major elements of the Frick press, as shown by that blueprint?

A. Will you repeat that, please?

The Court: Will you identify the major elements in the Frick press as indicated by this drawing?

A. There is the central chamber for the pressing of carbon dioxide, which has a vertically moving plunger which rises upward from the bottom of the chamber, that being operated by a piston in a hydraulic cylinder in the lower part of this structure. Above the chamber is a platen which forms a movable head. This platen being moved by a [855] rod connected to a piston in an upper hydraulic cylinder. On the right side facing the drawing are two pipe connections, one for the removal of gas; the other for the introduction of liquid and snow.

Q. By Mr. Miketta: Which of these pipe lines is for the removal of gas, the upper or lower?

A. The upper is for the removal of gas; the lower is for the injection of liquid or snow.

(Testimony of Earl P. Wells)

Q. Is there are vent line shown on this drawing?

A. Yes, there is a valve marked 1-44OR-10858 on the order of a bleeder. It is actually spelled "b-r-e-e-d-e-r", but I believe that is an error in spelling.
[856]

* * * * *

Q. By Mr. Miketta: You have referred to this line. Will you please circle the descriptive matter which you read into the record which identifies the vent line so that can be found on the blueprint?

The Court: I think you had better do it in red so it will show, and then it will be uniform.

A. I will draw a line around the valve just described, which is shown on the right-hand view of the press, and also around the hand wheel, which is shown on the left-hand view of the press.

The Court: All right. Put "W-1" there and "W-2" — "W" for Wells, and that will be the first one you mark, so everyone can see it, and this "W-2". They are the two places there where the vent valve is indicated, is that right?
A. Yes, your Honor.

Q. By Mr. Miketta: Now will you also apply a mark to the central cross-section shown on the blueprint so as to indicate the location to which that vent line is connected.

The Court: At which.

Mr. Miketta: At which that vent line is connected.

A. Yes. From a drawing standpoint, it could not be [858] shown in the central view because the central view is a section. The left-hand view, which is the same elevation of the press, is a frontal view and therefore the hand wheel can be shown.

(Testimony of Earl P. Wells)

Q. By the Court: The valve is inside and the hand wheel is on the outside; that is all that appears photographically, is that right?

A. Yes, your Honor. Well, the valve in the central view would be toward the observer and therefore could not be shown by the man making the drawing; but it is clearly shown in the right-hand view.

Q. By Mr. Miketta: Have you recently compared that blueprint, Exhibit H, with the Frick presses at defendants' plant? A. Yes; I have.

Q. Does that drawing correctly picture each of the two Frick presses at the plant?

A. Yes; it does, with the exception which I mentioned before of the upper piston and the further difference that the liquid inlet valve is now a cock type valve instead of a needle valve.

The Court: It has nothing to do with the record, but will you please explain to me the difference between a cock type valve and a needle valve in language that I can understand?

The Witness: Perhaps you have seen a valve in a gas line [859] on a gas meter, which is a plug with a slot through it and you turn the plug 90 degrees and close the line.

The Court: Yes. That is about the simplest form?

The Witness: Yes.

The Court: Yes.

A. That is a cock type valve.

The Court: All right. And then tell me what a needle valve is.

The Witness: A needle valve is similar to a globe valve, except that instead of having a flat disc closing the valve stem has a pointed enlargement which fills the

(Testimony of Earl P. Wells)

hole of the port, the purpose being that if the valve is open slightly, a small quantity of fluid will flow, whereas with a globe type valve with a flat disc, a slight opening might give a large flow.

The Court: I had one of those on my Willys-Overland a number of years ago, so I know what it is now. I didn't know what it was called. I had to take it out at the top of the Sierras so I learned all about that needle valve.

Q. By Mr. Miketta: Mr. Wells, have you personally seen anybody install a new sealing gasket on the H. P. M. press? A. No; I have not.

Q. Have you seen a new sealing gasket on the H. P. M. press during your various visits down to the plant?

A. No; only heard that they had been worked on.

Mr. Miketta: That will be all, your Honor. I would like [860] to introduce that Exhibit H for identification for the purpose of illustrating the witness' testimony.

Mr. L. S. Lyon: I would like to object to it for any other purpose, and ask that the legends appearing at the lower right-hand corner be excluded, if your Honor please.

The Court: Everything is excluded except that that illustrates his testimony. It is received only for that limited purpose. [861]

* * * * *

Cross-Examination

Q. By Mr. L. S. Lyon: Mr. Wells, will you hand me the sheet on which you have recorded the data which is reproduced as curve No. 6 on the diagram Defendants' Exhibit J? A. (Witness producing paper.)

(Testimony of Earl P. Wells)

Q. Is the handwriting on this sheet which you have handed me your own handwriting? [862]

A. Yes; it is.

Q. When did you make that writing?

A. April 22, 1944.

Q. At the plant? A. At the plant.

Q. Pursuant to whose instructions?

A. Mr. Miketta.

Q. And when did you receive those instructions?

A. Approximately April 15th.

Q. And what were those instructions?

A. To visit the plant and make a record of the actual operation of the presses.

Q. Is this the only operation that you saw at that time?

A. No. I observed several blocks being made but they were all so similar in pressure that I did not record them.

Q. And the weight given on this record for the block produced on that particular operation is 252 pounds. What was the dimension of the block?

A. I don't know the exact height. The width and length were 20 inches.

Q. Well, as nearly as you can specify the height, what was the height?

A. I would judge it to be around 11 or 12 inches.

Q. Well, was it 11 or 12? A. I don't know.

Q. Are you sure it was as much as 11? [863]

A. I couldn't say. I wouldn't care to say.

Mr. L. S. Lyon: I would like to offer this as plaintiffs' exhibit on cross examination of this witness.

The Court: It may be received as next in order in evidence.

(Testimony of Earl P. Wells)

The Clerk: 14 is the next of plaintiffs'.

Mr. L. S. Lyon: No. 14.

[Note: Plaintiff's Exhibit No. 14 will be found in the Book of Exhibits at page 1343.]

Q. You have no record of any of the times or pressures indicated on the curve 5 represented on Defendants' Exhibit J except a record of a maximum pressure of 70 pounds, is that correct? A. Yes.

Q. By the Court: That was purely theoretic, anyway, wasn't it?

A. Well, it was just a matter of incidental interest.

Q. By Mr. L. S. Lyon: What did you intend to illustrate by curve 5 as distinguished from Fig. 6 in preparing this Exhibit J?

A. To show the degree of variation which might occur at that point in the cycle in the normal operation of the plant.

Q. Does that show the complete range of operation, the difference between curves 5 and 6, that you are familiar with in that plant?

A. That is the maximum range that I saw during that day.

Q. What about other days, what ranges have you observed?

A. I have been told that the pressures reach 80 pounds.
[864]

The Court: No, no, no; not what you have been told, only what you have observed.

A. That is the maximum pressure that I have ever observed in the press.

(Testimony of Earl P. Wells)

Q. By Mr. L. S. Lyon: Did you ever observe the manufacture of triple point ice in that H. P. M. press at that plant prior to April, 1944?

The Court: Read that question.

(Question read by the reporter.)

A. I would have to refer to my notes to express an opinion on that.

The Court: Do it during the lunch hour, if you will, Mr. Wells.

The Witness: I can answer that question now, your Honor.

Mr. L. S. Lyon: Excuse me.

A. March 9th or 19th, whichever the record is,—there is a hole punched here—H. P. M. press—

The Court: Of the year 1941? A. '43.

The Court: '43.

A. —my record shows pressures varying from 60 to a maximum of 66 pounds.

Q. By Mr. L. S. Lyon: And do you have the times and the remaining data for the pressure curve for that observation?

A. Yes. It shows a venting at 20 pounds.

Q. What is the feeding time? [865]

A. Three minutes.

Q. The valve was closed at three minutes, and at that time what was the pressure? A. 66 pounds.

Q. And what was the boil-out time?

A. Pump-out period was $1\frac{1}{2}$ minutes.

Q. Then, what was the boil-down time?

A. Apparently that included the boil-down time.

Q. You have on Exhibit J shown both in curves 5 and 6 following the indication of the time at which the liquid valve is closed, shown a flat extension of the curve

(Testimony of Earl P. Wells)

between approximately 4½ minutes and 6 minutes. That corresponds, does it not, to what is called the blow-out time? A. Boil-out.

Q. Boil-out time? A. Yes.

Q. Then, you have shown a line slanting from about 60 pounds down to about 5 or 7 pounds over a period of 6 to 10 minutes. Does that correspond—

The Court: You mean between 6 and 10 minutes, a period of 4 minutes.

Mr. L. S. Lyon: A period of between 6 and 10 minutes, yes.

Q. That represents what is called the boil-out time—or blow-down time, is that correct?

A. Pump-out period, I would call it. [866]

Q. Pump-out period, or sometimes called a boil-down period, is it not?

A. I have never heard that term.

Q. What determines the length of that pump-out time in the defendants' operation as you have observed it?

A. It is largely affected by the number of pump-out compressors in use. The plant has two compressors and when they wish to increase production they shorten the press cycle by using two pump-out compressors, which has a penalty, of course, of higher power consumption and therefore is not resorted to unless maximum production is desired.

Q. The higher the back-pressure on the pressure system to which the compressor is connected at that stage, the longer the pump-out time, is that correct?

A. I should say it would be the reverse, because the pump-out compressor pumps more gas at higher pressure, higher suction pressure, therefore, if it is pumping a greater quantity of gas during the liquid inlet period, it

(Testimony of Earl P. Wells)

will have less to pump out during the remainder of the period.

Q. Have you ever observed any other operations in the manufacture of dry ice with the same type of press, H. P. M. press? A. Yes.

Mr. Foster: Objected to as immaterial and not proper cross examination.

The Court: Objection overruled. [867]

Q. By Mr. L. S. Lyon: Is the length of pump-out time in the operations that you have seen with the H. P. M. press at the defendants' plant at Niland similar or substantially longer than your observations of the same press used elsewhere?

A. I have never timed a press operation of any other plant in this manner.

Q. By the Court: Well, it would depend upon how many compressors they hitched up and what the pull was, wouldn't it? A. Yes, your Honor.

Q. By Mr. L. S. Lyon: Referring to curve 4-A on Exhibit J, what press was that operation conducted on?

A. That was the H. P. M. press.

The Court: Then, put a little legend on this one, too, "4-A" over there, with "October" so that we have that complete. I neglected that.

(Witness marking on diagram.)

Q. By Mr. L. S. Lyon: In that operation from which you have drawn the curve 4-A how was the pressure maintained of approximately 38 pounds for the period from one minute to four minutes?

The Court: About one-half a minute. You mean the beginning of that straight line?

Mr. L. S. Lyon: Yes.

(Testimony of Earl P. Wells)

The Court: That is nearer a half minute. Yes.
[868]

A. That was made by throttling the—let's see.

The Court: Read that question.

(Question read by the reporter.)

The Court: How was it maintained is his question.

A. Maintained, yes. That was done by throttling the liquid inlet valve by manual manipulation of a lever.

Q. By Mr. L. S. Lyon: How was the outlet valve set at that time?

A. To the best of my knowledge, it was wide open.

Q. By the Court: Remaining constant?

A. Yes, your Honor.

Q. By Mr. L. S. Lyon: Will you explain what you mean by your statement that the inlet valve was throttled and what the effect of so throttling the inlet valve would be on the pressure in the chamber?

A. Well, since the pump-out compressor is tending to pull a vacuum in the press, the amount of liquid permitted to enter will raise that pressure to any desired point. By manipulation of the valve a pressure can be maintained fairly constantly.

Q. Was this operation which you have represented in Fig. 4-A on Exhibit J conducted under the same circumstances or instructions to the workman as in the case of the operation which you have represented on curve 6 on the same exhibit; that is to say, did you ask the workman to operate the apparatus in his regular manner or was this specially [869] staged?

A. I don't remember the occasion of making that data. It may have been a regular operating period or it may have been an experimental period.

(Testimony of Earl P. Wells)

Q. Does curve 6 on this Exhibit J represent the only operation of the H. P. M. press for which you have data sufficient to draw such a time-pressure diagram where the operation was conducted under your instructions that it be a regular operation as distinguished from some specially staged test?

A. I don't remember the occasions for making the other records there, except that in general my interest in the press operation was concerned only with its effect upon the blowback compressor capacity and other parts of the system, because I had no contracts at any time to do work on the presses.

Q. Will you produce the record from which you have testified as to curve 3 on Exhibit J, the record for April, 1944?

A. (Witness producing paper.)

Q. Was this in your own handwriting?

A. Yes.

Q. Was it made at the plant at the time of the operation on April 22, 1944?

A. Yes.

Q. And was made on the Frick press? [870]

A. Yes.

Mr. L. S. Lyon: I will ask that this record be received into evidence as plaintiffs' Exhibit 15 on cross examination.

The Court: So ordered.

[Note: Plaintiff's Exhibit No. 15 will be found in the Book of Exhibits at page 1344.]

Q. By Mr. L. S. Lyon: At that time was the Frick press on which that operation was conducted in regular use in the plant?

A. No; it had not been in use for six months to my knowledge.

(Testimony of Earl P. Wells)

Q. What was the name of the workman that operated the press for that demonstration?

A. Mr. Brown.

Q. Who? A. Brown.

Q. What were your instructions to Mr. Brown for that operation?

A. To put the press into operation and make a block of ice.

Q. Did you tell him how? A. No.

Q. From your knowledge of that particular device, it was susceptible of operation in various manners, was it not? A. Yes.

Q. Will you produce the record from which you testified as to curve 4-A on Exhibit J?

A. (Witness producing paper.) [871]

Q. Is this in your handwriting? A. Yes.

Q. And when was the record made?

A. The date of the record is not shown but there is a date of October 4, 1942, above the press data.

Mr. L. S. Lyon: I ask that this be received into evidence as Plaintiffs' Exhibit 16 on cross examination.

The Court: It may be received as Plaintiffs' Exhibit next in order.

Q. By Mr. L. S. Lyon: Will you now produce the record from which you testified as to curves Nos. 1 and 2 on Exhibit J?

A. This data includes considerable other data.

(Testimony of Earl P. Wells)

Q. Any of it confidential?

A. I believe that there is nothing there which is of any concern. Pardon me. Is that dated? No date, but it was torn from a bound copy. In July 21, 1939.

Q. Is this record in your own printing?

A. Yes.

Q. And when was it made; at the time of the operations at the plant?

A. At the plant on July 1st.

The Court: Take this blue pencil and indicate what portions of that are applicable.

The Witness: I have already done it, your Honor.

The Court: In red, all right; and the balance of it will [872] be excluded as just cluttering up the record, unless later someone wants it for some other purpose.

Mr. L. S. Lyon: I will offer that portion for the record indicated by the red notation "used for graph" as Plaintiffs' Exhibit 17 on the cross examination of this witness.

The Court: It may be received and so marked.

[Note: Plaintiff's Exhibit No. 17 will be found in the Book of Exhibits at page 1345.]

Q. By Mr. L. S. Lyon: As I understand it, you do not recollect the circumstances under which these operations recorded on Exhibit 17 were made with respect to whether they were regular operations or specially staged operations, is that correct? A. Curves 1 and 2?

The Court: Which is Exhibit 17.

Mr. L. S. Lyon: That is this last exhibit.

(Testimony of Earl P. Wells)

A. Curves 1 and 2 were noted as typical operation in 1939, it being understood that one type of ice was made in the summer time and one in the winter time.

Q. You don't know any more about whether or not they were typical than what you were told, is that correct?

A. I observed them making ice in the summer of 1939, but I did not make a special note as to what type of ice they were making on that date.

Q. You have referred to the type of ice. Will you explain what you mean by that?

A. Whether it is made below the triple point or above [873] the triple point during the liquid injection period.

Q. What difference does that make in the ice?

A. The particles of solid are smaller if the liquid is injected below the triple point than above the triple point.

Q. Does that impart any particular characteristics or property to the ice, that difference?

A. It is not of great importance. If the ice is perfectly pure, the crystals will grow to a large size quicker if made above the triple point than below, because they already start out with larger particles.

Q. Do you know why the practice has been followed in this plant at Niland since 1939 and, as I understand you, up to date between the making triple point ice at one time of year and the snow ice at the other time of year?

A. I don't believe or I don't know that that is the rule at the present time. That was the—

Q. How long ago did you know of it being a rule?

A. At the time the plant was installed.

Q. Do you know whether or not that practice has been followed since?

A. No; I don't.

(Testimony of Earl P. Wells)

Q. When you say "the plant installed" you mean when you placed the revamped plant in operation?

A. Yes.

Q. That practice was being followed up to what date to your knowledge? [874]

A. I can't say. At that time the operators were making different kinds of ice more or less according to their own ideas, without much supervision.

Q. Did you ever direct the defendant as to what type of operation to conduct in the plant at Niland?

A. I gave them no advice or instructions as to regular operation of the press.

The Court: At this time we will take our midday recess, adjourning until 2:00 o'clock.

(Whereupon a recess was taken until 2:00 o'clock p. m. of the same day.) [875]

AFTERNOON SESSION

2:00 O'CLOCK.

(Parties present as last noted.)

The Court: You may proceed.

EARL P. WELLS,

recalled.

Cross-Examination

resumed.

Q. By Mr. L. S. Lyon: Referring to curve No. 1 on Exhibit J, at what point was the liquid valve closed on that curve?

The Court: The inlet valve?

Mr. L. S. Lyon: The inlet for the liquid, your Honor.

(Testimony of Earl P. Wells)

The Court: Oh, "liquid". I did not hear that word.

A. On curve 1 the valve was closed at the end of a half a minute from the start of opening.

Mr. L. S. Lyon: I did not hear that answer, please.

(Answer read by the reporter.)

Q. You are relying on your recollection for that entirely? A. My records show that.

Q. Refer to Exhibit 17, which is the record that you produced for that curve, and will you point out where on that record it shows?

A. Yes; triple point ice snowing one-half minute.

Q. Then, the bottom of these two lines is curve No. 1?

A. Yes. This whole row is Fig. 1. The first row of [876] figures is curve 2.

Q. Then, what time is indicated by the bottom of curve 1 as it appears on Exhibit J?

A. One and three-quarter minutes.

Q. And that is the total of?

A. The sum of one-half and one and one-quarter.

Q. And on Exhibit 17 the half minute is noted under the legend "snowing time". What does that mean?

A. Well, that means the mere period during which the liquid valve is open. I had to use that common caption, because otherwise I would have had to differentiate between the two types of ice. Actually snowing occurs only during the 30-pound ice-making condition.

Q. You have two legends here: One "snowing time" and one "pumping time," and the data for curve No. 1 under "snowing time" is one-half minute and under "pumping time" is one and a quarter minutes, is that correct? A. Yes.

(Testimony of Earl P. Wells)

Q. Actually there was no snowing occurring in the operation depicted in curve No. 1 during that first half minute; that is correct, isn't it?

A. No; the —no snowing. The liquid valve was open during that half minute period.

The Court: Read that question again, please.

(Question read by the reporter.)

A. There was no snow formation during that half minute [877] period, but the expression I used was common to the trade at that time.

Q. By the Court: By "snowing" you simply meant that was the time that the inlet valve was open?

A. Yes, your Honor.

Q. By Mr. L. S. Lyon: And when did the snowing actually start in that operation?

The Court: You mean 2 or 1?

Mr. L. S. Lyon: In the operation represented by curve No. 1.

A. The conversion from liquid to snow occurred after the pressure in the press dropped below the triple point during the pumping-out period.

Q. Then, the liquid CO₂ actually remained liquid in the press from the end of the first half minute shown on curve 1 down to the end of the full minute shown on curve 1, is that correct?

A. Approximately. Since I took no readings during the interval from a half minute to a minute and a quarter, the curve is not exact during that period, and actually there probably was a slight hump or flattening out at the 60-point line during that operation.

Q. Actually the only readings you have for curve No. 1 so far as time is concerned is a reading at a half a

(Testimony of Earl P. Wells)

minute and a minute and a quarter; that is correct, is it not?

A. Those are the only time intervals at which I measured [878] this.

Q. And the shape of the curve between those two times is hypothetical, is it not?

A. It is rough, yes; it is approximate.

Q. You do not believe it was a straight line?

A. I believe it was not a straight line.

Q. Referring to curve 2 on this Exhibit J, do your records show where on that curve, at what time on that curve the liquid inlet valve was closed?

A. Yes; at the end of one minute and a half.

Q. And what was occurring during that minute and a half in the operation?

A. Snow was being formed in the chamber.

Q. And then what was occurring during the following minute, which you have under the legend "pumping time"?

A. Gas was being removed from the chamber.

Q. Do you have any readings for that curve other than those two, the minute and a half and the one minute?

A. No; those were the only two readings.

Q. The shape of the curves between those times also is assumed, is it not?

A. Yes. It is approximately correct.

Q. Do you know of the defendants in this case, any of them, actually employing an operation corresponding to either curves 1 or 2 on Exhibit J since you revamped the plant at Niland in the spring of 1940? [879]

A. I don't know which operation they use regularly. I know that they have made ice under both conditions,

(Testimony of Earl P. Wells)

but whether it was regular operation or experimental operation I don't know.

Q. Can you point to a record in your papers here, or have you a record of any such operation by the defendants since the spring of 1940?

A. You mean as a regular operation?

Q. Have you a record of such an operation in that plant since the spring of 1940?

A. I don't know without looking.

Mr. Miketta: Objected to, your Honor, as not identifying the press in which the operation was made.

The Court: Any one of the three presses.

A. The questions previously were all concerned with the Frick press. I wonder if the attorney means the same press?

Q. By Mr. L. S. Lyon: Have you a record for such an operation, in the spring of 1940, in that plant, for any of the presses?

A. There is a notation of October, 1942, of a snowing operation.

Q. Will you produce that record, please?

A. That has already been submitted in evidence, I believe; the bottom sheet.

The Court: That is the 4-A curve?

A. Yes, your Honor. [880]

Q. By Mr. L. S. Lyon: Have you any other record of the snowing operations since the spring of 1940, in that plant?

A. No, not for that type of operation.

The Court: Just what do you mean by that?

A. For the low-pressure ice.

Q. Have you any for the triple point?

A. Yes.

(Testimony of Earl P. Wells)

Q. By Mr. L. S. Lyon: Have you any records showing what type of operation was employed in the defendants' plant at Niland, since you revamped that plant, from the spring of 1940 up to your records for your operations in 1944, except the record from which you drew curve 4A?

A. March 19, 1943, is an operation on the H. P. M. press, making triple point ice.

Q. Was that a specially staged experiment, or a regular operation, so far as you know, if you know?

A. There is no notation here of whether it was a regular operation or special, and I don't recall.

The Court: Just a moment, please. Mr. Wells, in your answer, what was your distinction between the regular operation and a special operation? Is there any difference in the method employed?

A. We conducted various operations of a press for various purposes other than the production of ice. For example, to determine the effect of the pumping rate upon the rest of the plant, which affected the use of other parts [881] of the plant. There were other experiments which we performed in connection with purification of the gas. That is what I mean by special.

Q. Don't your records show whether you were making one of those tests, or whether you were making ice?

A. This page indicates that this record was incidental to some other pressure readings of the various compressors. Here is a conclusion I have on the center of this sheet: Plant No. 2 CO₂ condenser operates at 6 to 8 degrees higher condensing pressure than No. 1 condenser. Cause unknown. I don't recall the relation between the press cycle and that problem at that time. It may have

(Testimony of Earl P. Wells)

been taken just to complete my records for other purposes, in case I needed them.

Q. How were you going to determine that question if you did not run the cycle?

A. That I didn't run the cycle?

Q. I say, how were you going to determine that without running the cycle? Wasn't that the only way you would have been able to determine the time difference between the condensers? Is there any artificial way you could have measured that?

A. No, there doesn't seem to be any relation between this condenser pressure and this press cycle.

Q. I don't mean that. You make the statement there that there was a difference between the two compressors, No. 1 and No. 2. [882]

A. Condensers?

Q. Condensers, I meant. How were you going to determine that without going through the operation cycle?

A. That is a conclusion, apparently, from other data on the same page, which shows condensing pressures and compressor pressures, and temperatures, so that conclusion evidently referred to other data on the sheet, rather than to press cycles. [883]

Q. Did you from time to time conduct special demonstrations, or experimental operations, in that plant, in which you employed different times and different pressures from those which were employed in the regular commercial operations of the plant?

A. Will you read the question?

(Question read by the reporter.) A. Yes.

Q. Referring to this Exhibit 16, which, as I understand it, is the exhibit from which you drew, curve 4-A, on Exhibit J, can you tell us whether or not that is a record of a regular operation of the plant, or of one of

(Testimony of Earl P. Wells)

these special tests or demonstrations that you were conducting?

A. I couldn't say. There is nothing on here which indicates that it was a regular or special operation.

Q. Will you refer to this record, Exhibit 16, and to the curve 4-A, and indicate to the court just which points on the curve are actually established by that record, and which points on the curve are hypothetical or extrapolated?

A. There is only one pressure shown on this data, which is 40 pounds, and that indicates that the pressure was maintained at 40 pounds during the snowing operation; that at the end of that operation the pressure would naturally drop to zero, if permitted to go all the way. [884]

Q. Do your records show whether or not it was permitted to go all the way?

A. There is no further pressure record.

Q. Then the curve from the period marked four minutes on this curve, 4-A, from there to six minutes, is entirely hypothetical, is it not?

A. Yes, it is indefinite, but approximate.

Q. Can you answer my preceding question, as to whether or not you have in your records any data from which you can construct curves showing the operations in defendants' plant from the time you revamped it, in the spring of 1940, up to April, 1944, other than this Exhibit 16?

A. I think I previously answered that same question under date of March 19th.

Q. Anything else?

A. What was the first date that you specified?

(Testimony of Earl P. Wells)

Q. Commencing with your revamping of the plant?

A. This notation on February 25, 1942, shows the H. P. M. operation, having a snow time of two and one-half minutes at 70 pounds. Actually, that was not snowing, of course, at that pressure.

Mr. L. S. Lyon: I will ask that the record just identified by the witness be received in evidence as Plaintiffs' Exhibit 18.

The Court: It may be so received.

[Note: Plaintiff's Exhibit No. 18 will be found in the Book of Exhibits at page 1347.]

Q. By Mr. L. S. Lyon: There isn't sufficient data [885] on Exhibit 18 to enable you to draw a time pressure curve for that operation, is there?

A. Not an accurate curve, no.

Q. Have you any further records in answer to my question? A. No.

Q. Your answer includes the records you have in the court room, as well as any other records that you know of that you have; is that correct? A. Yes.

Mr. L. S. Lyon: That will be all.

Redirect Examination [886]

* * * * *

Q. Mr. Wells, can you state whether or not you gave the operators any instructions as to the pressures which they were to use in the pressing chambers during their regular operation? A. I did not at any time.

Q. Did you give any such instructions at the times that you were conducting experiments?

A. Yes, the pressures were operated according to my instructions during experimental tests.

(Testimony of Earl P. Wells)

Q. Would you identify those particular experiments at which time you gave such instructions?

A. I can't identify any of those from the records, or from memory, as to whether they were regular or experimental.

Q. From your observations of the snow presses, would you state whether it is possible to press a satisfactory brick of solid carbon dioxide without permitting the pressure in the chamber to drop to zero or atmospheric?

A. No, when the pressure finally reaches zero it will always be formed.

Q. Is it possible to obtain a satisfactory block by pressing snow in the chamber without permitting the pressure to first drop to atmospheric or zero gauge pressure before the pressing actually starts?

Mr. L. S. Lyon: I think there should be some foundation laid, your Honor. I don't think this witness is [887] qualified as an expert, from the operation of presses. I think he has made it clear they were incidental to his work. There has been no foundation laid for this question, as to whether he has any knowledge one way or the other. [888]

Mr. Miketta: If you know.

The Court: Oh, I think he may answer. If he does not know, he may say so. If he does, then you can re-examine him on recross. You may answer.

A. If there is any pressure existing in the snow chamber during pressing, there is a great likelihood of gas pockets at those pressures remaining in the block and causing explosion after the block is removed.

Mr. L. S. Lyon: I move to strike the answer as not responsive, your Honor.

(Testimony of Earl P. Wells)

The Court: Well, read it, please.

(Answer read by the reporter.)

The Court: Therefore, what, in answer to the question?

A. Therefore, a complete whole block could not safely or usually be obtained from the press under those conditions.

The Court: I think that answers it.

Mr. Miketta: That will be all, your Honor.

Mr. Foster: Might I have the court's indulgence for one or two questions?

The Court: Surely.

Redirect Examination

Q. By Mr. Foster: Mr. Wells, I notice on this Defendants' Exhibit J with respect to all of these curves, 1, 2, 3, 4-A, 5, and 6, at their terminus they appear to drop substantially vertically and I understand that represents the drop in pressure when the presses are vented to atmosphere, is that [889] correct? A. Yes.

Q. And immediately before that short drop characteristic of each of these curves at their terminus, the curves all decline sharply and that represents the pump-out operation, is that correct? A. Yes.

Q. During your work from 1940 into 1944 at the defendants' plant at Niland, on your trips there the plant, as I understand it, was operating commercially, producing ice for sale? A. Yes.

Q. And during your observations of the defendants' plant in that period when it was operating commercially to produce ice for sale are these short drops at the terminus of each of these curves, 1, 2, 3, 4-A, 5, and 6 of Exhibit J, typical of the pressure drops you observed at such times? A. Yes.

(Testimony of Earl P. Wells)

Mr. L. S. Lyon: I object to that on the ground that it is leading; and second, on the ground that the witness has not shown in any of his records any record of any such drop at all.

The Court: Read that question, please.

(Question and answer read by the reporter.)

The Court: As I understand it, graphically, these simply represent the short distance between two points; you have [890] taken a reading at a certain point and you take a reading in another point, and you just sketch that in for convenience. Actually it is not going to be straight; it is going to be a wavy line. If you did it every second, you would just have that wavy all the way down; is that not correct?

A. Yes. In addition, the curve might have a very slight slope, that is, it might take two seconds for the gas to leave the chamber during the venting period, but the scale does not permit showing it in this short-time interval.

Mr. L. S. Lyon: My objection, your Honor, includes the point it has already been developed by the witness that he made no readings, for example, such as indicated at a pressure of five pounds at two minutes and a half on curve No. 2, or at two minutes and three-quarters on curve No. 3. I inquired about that and there were no records of any such readings. These are extrapolations, and I don't think counsel should put the words into the mouth of the witness that he has done something which, clearly, he has not done.

The Court: I did not so interpret the question. As I understand it, all he wants to know is if the drop experienced is indicated approximately on those drawings as being the drop that you find in the regular course of com-

(Testimony of Earl P. Wells)

mercial manufacture. Is that what you meant by your question?

Mr. Foster: Yes, your Honor; that short drop.

A. It is my impression that the operation was typical.

Q. By Mr. Foster: Is the same thing true, Mr. Wells, as [89] to the last sharp drop in these presses, all three presses at the defendants' plant, immediately prior to the opening of the vent; that is, is the drop in pressure as indicated upon these curves at that time, in curves 1, 2, 3, 4-A, 5, and 6, typical of the drop in pressure you observed during commercial operations at the defendants' plant to produce ice for sale?

A. Yes; it is.

Mr. Foster: That is all, your Honor.

Recross-Examination

Q. By Mr. L. S. Lyon: Mr. Wells, do your records show whether you actually made a measurement at the end of six minutes on curve No. 4-A and found the break in the curve there indicated at a pressure of 10 pounds?

A. No; they do not.

Q. Did you make any such measurement?

A. No; I did not.

Q. Is your answer the same for the similar breaks in the curves at the bottoms of all of these curves?

A. I believe my record on curve 6 may show that. Yes; my record on curve 6 shows that the pressure was 7 pounds at the time of venting.

(Testimony of Earl P. Wells)

Q. And that was at what time?

A. At 9½ minutes.

Q. You made no measurements to establish any such point on any of the other curves, is that correct? [892]

A. There was one record of a venting at 20 pounds, and I can't remember whether that was the basis of one of the curves or not. I believe it was. Let's see.

Q. Look at Exhibit J and indicate on which of the curves there is a venting at 20 pounds.

Mr. Foster: May I ask if the witness has or may have before him all of the data sheets you have taken from him and introduced?

Mr. L. S. Lyon: He has them all, your Honor.

A. Date of March 19, 1943, shows the venting occurred at 20 pounds pressure. [893]

* * * * * * * * *

Q. This record of March 19, 1943, is the one you explained to the court with reference to these values in the compressor system? A. Yes.

Q. And in which you said that you did not know whether there was any relation between the press operation and the notes or values given for the compressor system? A. Yes.

Q. Now, then, do you know whether or not this press cycle operation for which the data is given on this sheet for March 19, 1943, was a special demonstration for your own observation or was a regular operation in the plant?

A. I don't know.

(Testimony of Earl P. Wells)

Mr. L. S. Lyon: In view of the fact that I have referred further to this last sheet, I would like to have it in evidence, your Honor.

The Court: It may be received and marked as Plaintiffs' next in order.

Mr. L. S. Lyon: A record which the witness has produced of the operation dated March 19, 1943.

The Witness: May I inspect it first? May I see if there [894] is any other data attached there?

Mr. L. S. Lyon: If there is any data on there, I would be perfectly willing you should read in the material that pertains to the press cycle.

The Witness: This is an entirely different matter attached to it (detaching sheet).

Q. By Mr. L. S. Lyon: There is nothing in this first sheet?

A. Nothing, you mean, in regard to the press?

Q. No; I mean nothing confidential in this one?

A. No.

The Court: Nothing extraneous, either, in it?

A. Well, there is irrelevant matter there.

Q. By Mr. L. S. Lyon: The part that refers to the pressures and times and the press cycle is indicated by the red line?

A. Yes.

Mr. L. S. Lyon: I ask that this be made plaintiffs' exhibit next in order.

The Clerk: 19.

[Note: Plaintiff's Exhibit No. 19 will be found in the Book of Exhibits at page 1349.]

(Testimony of Earl P. Wells)

Mr. Foster: The part indicated by the red line only, I suppose, your Honor.

The Court: Yes. Any further questions?

Redirect Examination

Q. By Mr. Miketta: Mr. Wells, did I give you instructions as to what pressures to employ in the snow presses on the date of your last visit to the plant? [895]

A. Your only instructions were to record the pressures as they were actually observed in regular operation of the plant.

Mr. Miketta: That will be all, your Honor.

Mr. L. S. Lyon: No further question.

* * * * * * * *

The Witness: Yes, your Honor. I understand that this data as submitted as evidence, is it to remain my property?

The Court: May it be stipulated that photostatic copies may be substituted for the original sheets and that they may then be returned by the clerk to Mr. Wells for his records?

Mr. Miketta: Thank you, your Honor. So stipulated.

The Court: So stipulated?

Mr. L. S. Lyon: Yes, your Honor. [896]

* * * * * * * *

FRANK S. HADFIELD,

called as a witness on behalf of defendants, being first duly sworn, was examined and testified as follows:

The Clerk: State your name, please.

A. Frank S. Hadfield, H-a-d-f-i-e-l-d.

Direct Examination

Q. By Mr. Miketta: Mr. Hadfield, will you please state your present occupation and position?

A. I am president of the Associated Refrigerating Engineers of Los Angeles.

Q. And for how long have you been president of that organization? A. Since October, '38; 1938.

Q. Will you describe the type of work that is done by your organization?

A. We are engineers and contractors of refrigerating plants, such as ice plants, water-ice plants, cold storage plants, dry ice plants, quick-freezing plants.

Q. What technical training have you had, Mr. Hadfield?

A. I was graduated from the University of Illinois in 1904 with a B.S. degree, took postgraduate work in 1905, and received a mechanical engineer's degree.

Q. In your work you studied machine design?

A. No; refrigerating plant design.

Q. Will you please state some of the other positions or associations that you have had prior to 1938? [898]

A. Well, from 1921 until 1938 I was with the Gay Engineering Corporation as engineer and estimator, production manager, and general manager.

Q. And prior to 1921 what were your duties and occupations?

A. Well, I had charge of a municipal light and water plant in Michigan, and was a mechanical engineer for the

(Testimony of Frank S. Hadfield)

Globe Soap Company at Cincinnati for five years, and previous to that worked with an electric light and power company in Illinois.

Q. You mentioned ice manufacture and ice refrigeration. What was your earliest contact with ice as a refrigerant?

A. Well, other than using it, my first contact with the manufacture of ice was about 1910, when I went to Newark and investigated the Holden method of making ice.

Q. Will you please describe what this Holden method was?

Mr. L. S. Lyon: I object, your Honor. This apparently is water ice and not particularly pleaded or not pertinent. It is immaterial in this case. At least we ought to have some more definite application of it before we listen to somebody's method of making water ice in 1910.

Mr. Miketta: It is preliminary, your Honor.

The Court: Well, if you make it short, all right.

The Witness: What was the question, please?

(Question read by the reporter.)

A. Holden made ice by refrigerating a revolving drum and [899] scraping the ice off of the drum and then collecting this ice in a press and pressing it into a block of ice. [900]

* * * * * * * *

Mr. Miketta: I was going to be very brief on the point.

The Court: Go ahead, and take it subject to a motion to strike.

(Testimony of Frank S. Hadfield)

Q. By Mr. Miketta: Mr. Hadfield, will you state whether you have seen ice crystals pressed into blocks.

A. Yes.

Q. When did you first see that done?

A. That was approximately 1910.

Q. Is that practice still being employed in the manufacture of ice blocks?

Mr. Morris: Is this in relation to water ice? I did not understand whether the question was addressed to water ice or not.

Mr. Miketta: Yes, water ice crystals.

A. Water ice.

Q. Is that still being done, Mr. Hadfield?

A. Occasionally; very slightly.

Q. Will you state very briefly the machine or apparatus in which you saw that being carried out, beginning in about 1910? [910]

A. My recollection is very vague of this machine. That was a long time ago; but it was a press, in which these crystals of ice were put, and then the press was operated, and a block, a rectangular block of white ice was made out of the crystals.

Q. In what form were the crystals when they were admitted into the press?

A. Small ice crystals that had been scraped off of a drum.

Q. Just how were they moved into the press?

A. They were moved in under steam water.

Q. Was there an outlet to the press?

A. Yes, there was an outlet provided for the water that was squeezed out of the ice, and mixtures, and, of course, an outlet for the ice to go out.

(Testimony of Frank S. Hadfield)

Q. When you say an outlet for the ice, you mean the block of ice? A. The block of ice, yes.

Q. Was the plunger moved toward or away—

A. Yes, the plunger was operated. I won't say whether that was hydraulically operated, or mechanically. I can't remember, but it had to be operated, of course.

Q. Mr. Hadfield, in a press of any type, what is the function of the pressing plunger?

A. To compress the contents of the chamber.

Q. Does that function change if you change the material [911] being pressed in the machine?

Mr. L. S. Lyon: I object to that as too general; no foundation laid. The witness has not been qualified to answer the question.

Mr. Miketta: He is an expert engineer. I think he can answer that question, your Honor.

The Court: I think you are getting into common knowledge. Certainly, it is common knowledge that you have got to apply the pressure, either manually, or by some type of apparatus, like a hydraulic cylinder, and the purpose of that also is manifest. It is to squeeze something out of the material, or to compact the material. There may be nothing squeezed out of it at all. I don't think, when you squeeze cotton ordinarily you get anything out of it.

Mr. L. S. Lyon: If you squeeze cottonseed—

The Court: I have made too much cottonseed oil, not to know that. You may answer. A. No. [912]

Q. By Mr. Miketta: Are you familiar with processes of solidifying carbon dioxide? A. Yes.

Q. Have you ever supervised the installation of presses for solidifying and pressing carbon dioxide?

A. Yes, sir.

(Testimony of Frank S. Hadfield)

Q. Where?

A. At National Dry Ice Company, at Niland.

Q. When?

A. I installed one press in 1936, and another one in 1942.

Mr. L. S. Lyon: I move to strike this testimony unless it is admitted solely to show the experience and qualifications of this witness.

The Court: That is all I understand it is for.

Mr. Miketta: That is correct.

The Court: Overruled. [913]

* * * * *

Q. By Mr. Miketta: Have you observed the operations of the so-called snow presses at the plant of the National Dry Ice Company, since 1936? [914]

A. Yes.

Q. Have you and your company done any work for Natural Carbonic Products, Inc., at their plant at Niland, California?

A. We advised them on the setting of the H. P. M. press, early in 1941.

Q. What instructions did you give them at that time?

A. Instructions as to how to pipe up the press to their system.

Q. Will you specify in greater detail what pipes you refer to?

A. The method of connecting the pump-out machine into the press; the method of connecting the liquid supply to the end of the press, and the method of venting it to the atmosphere.

(Testimony of Frank S. Hadfield)

Q. Did the H. P. M. presses come equipped with apertures or holes for all those connections?

A. H. P. M. presses are generally manufactured to the buyer's specifications as to where the openings are to be placed, and the size of the openings.

Q. When was the first time that you saw the H. P. M. press in operation at the plant of defendant, Natural Carbonic Products, Inc.?

A. I think it was the summer of 1942.

Q. Have you observed that press in operation, making blocks? [915]

A. Yes.

Q. Did you see an air vent in that press?

A. Yes.

Q. Was that air vent being operated?

A. Yes.

Q. From your experience with snow presses, Mr. Hatfield, what would your reaction be if you saw a snow press without an air vent?

A. I wouldn't operate it.

Mr. L. S. Lyon: I object to that as not a proper form of question. I don't know what he means by what his reaction would be.

The Court: Objection sustained.

Mr. Miketta: Let me rephrase it, your Honor:

Q. From your experience, Mr. Hatfield, would a snow press without an air vent be capable of producing a satisfactory block?

A. No.

Q. Will you state why?

A. There is too much danger of pressure accumulating in the chamber due to a number of causes, that would make it not only dangerous to operate, but would probably produce a tension in the block that would cause it to explode when it was ejected from the press.

(Testimony of Frank S. Hadfield)

Q. Have you seen any such explosion, or disfiguration of the block? [916]

A. I haven't seen the block explode, but I have seen the pressure accumulate in the press, because in the making of snow ice we quite often get stoppage in the pump-out line, due to the presence of snow in that line, and this stoppage may or may not be indicated on the gauge, but if the vent is opened to air immediately that pressure, of course, is noticed, because we get a very heavy out-rush of gas from the chamber due to the pressure that is still up in there. [917]

Q. At what stage of the operation is the air vent opened?

A. The air vent is opened before the pressing of the block is started.

Q. When is the last time that you visited the plant of Natural Carbonic Products?

A. April 25, 1940.

Q. Was the H. P. M. press in operation at that time?

A. Yes. [918]

* * * * *

Q. By Mr. Miketta: Mr. Hadfield, did you take any readings of pressures and times, or the pressure and time relationships existing in the press while on your last trip down to the plant? A. I did.

The Court: Now, don't you see why a question like that is perfectly proper and just good sense and moves things along. The other one may be strictly all right from the technical standpoint, but it just wastes a lot of time.

Q. By Mr. Miketta: Did you make any records of your observations at that time? A. I did.

(Testimony of Frank S. Hadfield)

Q. Will you produce them, please? May I confer with the witness, your Honor?

The Court: Yes, sir. Counsel for the plaintiffs may also.

Mr. L. S. Lyon: These are some more records that have not [919] been submitted to us, your Honor.

Q. By Mr. Miketta: Are these in your own handwriting, Mr. Hadfield? A. Yes.

Q. And they were made at the time? A. Yes.

Mr. L. S. Lyon: May I ask, your Honor, why these records have not been submitted to us for our consideration? If we are going to have cumulative evidence here, if it be submitted, it would certainly help to save some time as the witnesses come along.

The Court: Yes. I think they should be submitted if they are going to be used, in order that we do not have to stop and have them examined.

Mr. Miketta: May the court please, I did not even know that the witness had these records in his possession until this noon.

The Court: Go ahead, then. That is sufficient excuse.

Q. By Mr. Miketta: Did you give the operators any particular instructions when you were taking those readings, Mr. Hadfield? A. No.

Q. Did you announce yourself to anyone or to the operator at that time? A. No.

Q. Do they correctly state the times and pressures which [920] you observed? A. Yes.

Mr. Miketta: I ask that they be introduced in evidence, your Honor, as defendants' next exhibit.

Mr. L. S. Lyon: We object on the ground it is not the proper method of proof.

The Court: Objection sustained.

(Testimony of Frank S. Hadfield)

Mr. Miketta: May I have them marked for identification?

The Court: Yes; they may be marked for identification.

The Clerk: Mark them all as one exhibit, your Honor?

Mr. Miketta: All as one exhibit; yes.

The Court: Yes; if that is satisfactory to counsel.

The Clerk: Exhibit K for identification.

[Note: Defendants' Exhibit K will be found in the Book of Exhibits at page 1369.]

The Court: You may use them to refresh his memory and the plaintiffs may put them into evidence if they want to, but you can't have the man testify and put in his memorandum, both. That is the point.

Q. By Mr. Miketta: What were the maximum pressures which you observed on the trip to which you have referred?

A. In one operation the pressure was up to 70 pounds; the other operations it was 65 pounds.

Q. By the Court: That is maximum?

A. Maximum.

Q. And was that gauge? A. Gauge.

Q. By Mr. Miketta: And during those operations was the [921] air vent opened prior to the initiation of the pressing operation? A. Yes.

Q. Did you observe the movement of the lower platen at any time? A. Yes.

Q. Will you please describe whether that was moved during the snowing or pressing operation?

(Testimony of Frank S. Hadfield)

A. At the start of the pressing operation the bottom platen was dropped approximately one inch before the top platen was operated downwardly.

The Court: Excuse me. Now, I didn't hear that last.

A. That was before the top platen was brought down.

Q. By Mr. Miketta: The top platen is the pressing plunger? A. Is the pressing plunger; yes.

Q. How did you observe the pressures, Mr. Hadfield?

A. Two of the operations I took readings approximately every minute; in one or two cases, every half minute.

Q. And by means of a pressure gauge?

A. A pressure gauge that was on the gauge board at the plant.

Q. Can you state that the operation which you observed was typical of the commercial production or operation of an H. P. M. press in the production of solid CO₂?

Mr. L. S. Lyon: I object to that as no foundation laid.

The Court: He is laying the foundation. He asked him if [922] he could; and if he says "no", that ends it. If he says "yes", then we will find out. A. Yes.

Q. By Mr. Miketta: Was that operation typical of commercial operations? [923]

* * * * *

A. Typical of making triple point ice.

The Court: That is typical—

A. Of the triple point.

Q. —in your judgment, of commercial operations for making triple point production?

A. Triple point ice; yes, sir.

(Testimony of Frank S. Hadfield)

Q. By Mr. L. S. Lyon: In H. P. M. presses, as I understand it?

A. Yes; in H. P. M. presses; that is correct.

The Court: Yes; I so understood it. That was what you meant?

Mr. Miketta: Yes. I think I added that to the question, your Honor.

Q. I believe you testified, Mr. Hadfield, that you first saw that press in operation in the summer of 1942, is that correct? A. Yes.

Q. On your last visit to the plant in April of this year was that press in substantially the same condition in which you observed it in the summer of 1942?

A. Yes. [924]

Q. It had the same connections? A. Yes.

Q. It was provided with the same appurtenances?

A. Yes.

Mr. Miketta: That will be all.

* * * * *

Cross-Examination

Q. By Mr. L. S. Lyon: Mr. Hadfield, when you referred to H. P. M. presses in your testimony you were referring to the product of the Hydraulic Press Manufacturing Company? A. Yes.

Q. Where other than at the defendants' plant at Niland have you ever observed such a press in the process of manufacturing triple point dry ice?

A. The National Dry Ice plant at Niland.

Q. And where else? A. That is all.

Q. Then you have only seen one other of these presses, other than the one at the defendants' plant, is that correct? A. That is right.

(Testimony of Frank S. Hadfield)

Q. How long have you known of the H. P. M. press at the [925] National Dry Ice Company?

A. Since 1936.

Q. It has always been used for the manufacture of triple point ice? A. No.

Q. Has the defendants' H. P. M. press always been employed for making triple point ice, to your knowledge?

A. I do not know.

Q. Were you asked by someone to make this trip in April of this year to the defendants' plant? A. Yes.

Q. Who? A. Mr. Miketta.

Q. Was today the first time that you told Mr. Mocketta that you had made any record of your observations? A. Yes, sir.

Q. Didn't he ask you to make any record when you went down?

A. He asked me to observe the pressures and times.

Q. And didn't he ask you to record them?

A. No.

Q. You had no discussion with him about whether you were going to make any notation of your observations?

A. He didn't tell me to make a notation. I suppose he assumed I would. I don't know what he assumed.

Q. You assumed he intended you to, did you not? [926]

A. Whenever I am sent out to observe an operation I make notations, of course.

Q. And you made no report to Mr. Miketta of the results of your trip until today?

A. He asked me if I had been down there and I told him I had; yes.

(Testimony of Frank S. Hadfield)

Q. But he did not ask you what you had seen?

A. No.

Q. You did not make any report to him at all?

A. No.

Q. When did you first see him after you came back?

A. Well, I don't know. It must have been about ten days ago, probably.

Q. Tell us just what instructions Mr. Miketta gave you before you went down.

A. Just to observe the operation of the press and the pressures and the times.

Q. He asked you to particularly observe the times and pressures? A. Yes.

Q. How long before you actually made the trip was this request made of you? A. One or two days.

Q. Who operated the H.P.M. press on the occasion of these readings that you took?

A. The name is on one of those sheets there. I forget it. [927]

Q. A man named Bradford? A. Bradford; yes.

Q. How long were you there?

A. From about 10:00 o'clock in the morning until about 11:30.

Q. How long after you returned did you report to Mr. Miketta? A. I didn't report to him.

Q. Did you see him? A. I saw him.

Q. How did you come to see him?

A. He asked me to come up to his office.

Q. Did you have any discussion relative to your trip?

A. No. [928]

(Testimony of Frank S. Hadfield)

Q. By Mr. L. S. Lyon: Did you tell Mr. Miketta what you had done down there?

A. I told him I had been to the plant.

Q. Anything else? A. No.

Q. Did he ask you what you—

A. We didn't discuss that at all. We didn't discuss the readings. He didn't see the readings.

Q. Did you tell him you had made the readings?

A. I don't think I was asked. I don't think I told him. Our discussion was about other matters entirely and not about those readings.

Q. Did he ask you particularly to observe the opening of the valve that controlled the venting to the air, to the atmosphere?

A. He asked me to make a sequence of the operations, to [929] make sure of the sequence of operations of opening the valves.

Q. What was the pressure in the chamber at the time that the vent was opened to the atmosphere?

A. 5 pounds.

Q. How long did it require to pump out the gas down to that point?

A. It varied somewhat. The times are all on those sheets. If I may have them, I can tell you.

Q. Can you give me this information without this sheet? A. Not exactly.

Q. Well, can you tell?

A. Approximately 3-1/2 minutes snowing time.

Q. Approximately what time was the liquid feed opened in this operation? A. 3-1/2 minutes, about.

Q. What time of day?

A. One test started at 10:20, another test started at 10:35.

(Testimony of Frank S. Hadfield)

The Court: Well, I am not interested as between 10:00 and 10:30.

The Witness: Do I have to remember all those? Three or four tests were made in the morning.

Mr. L. S. Lyon: I am interested in the situation in so far as the court is to be urged that it was contemplated that this man would testify from memory here today, instead of [930] having in his possession a memorandum to testify from.

Mr. Foster: I object to Mr. Lyon putting words in the mouth of my associate. He has not made any contention like that at all.

The Court: That is correct; and we are not trying Mr. Miketta. We are trying a lawsuit now. He is entitled to look at his memoranda to refresh his memory, if he wants to.

Q. By Mr. L. S. Lyon: You have referred to the water ice press that you used in 1910.

A. I did not use it.

Q. You referred to a Holden press as having seen it in 1910? A. Yes.

Q. You did not use it yourself? A. No.

Q. Where did you see it operated?

A. I think it was at Newark, New Jersey.

Q. Can you fix the date when you were there?

A. No.

Q. How many times did you see that press in operation? A. Just once.

Q. For how long a period?

A. One day. I was there one day and saw it operate.

Q. Did you ever see a duplicate of that press operated anywhere else? A. No. [931]

(Testimony of Frank S. Hadfield)

Q. Do you know how many of those Holden presses were ever employed? A. No.

Q. Did you learn at the time?

The Court: I did not get the answer to that question.

A. "No."

The Court: No.

Q. By Mr. L. S. Lyon: Did you learn at the time that it was called a Holden press?

A. I might explain that the reason I went to look at this press was that Mr.—

Q. I am not interested in that. Did you learn at that time?

A. I am trying to tell you how I knew it was Holden. You asked me.

Q. The reason that you went to look at it is not what I am interested in. I want to know if at that time you learned that it was called a Holden press? A. Yes.

Q. How?

A. Because Mr. Holden owned it and operated it.

Q. Were you acquainted with Mr. Holden?

A. I met him through his nephew.

Q. Is that the only time you ever saw him?

A. Yes.

Q. How was the slush ice fed into that press? [932]

A. Through a trough, as near as I can recollect. It picked up the ice and water from the—

Q. And where did the trough enter into the press?

A. I don't know. Into the pressing chamber, of course; but just what point, I don't know.

Q. Was there any provision in that press for the escape of gases?

A. I wouldn't know. There wouldn't be any gases to escape normally, except a little air.

(Testimony of Frank S. Hadfield)

Q. Did you ever know of one of those Holden presses being used for the manufacture of dry ice? A. No.

The Court: Answer audibly so that the reporter can hear.

A. No.

Mr. L. S. Lyon: I think that is all, your Honor. Just one minute. That is all.

Mr. Foster: May I ask a few questions?

The Court: Yes, sir.

Redirect Examination

Q. By Mr. Foster: Mr. Hadfield, when you saw this Holden press in 1910 was it being used in the commercial production of ice? A. Yes.

Q. And were you asked by Mr. Holden or anyone there to keep the knowledge you acquired of that device secret? A. No. [933]

Q. Was the use of the device open? A. Yes.

Mr. L. S. Lyon: I object to that as calling for a conclusion, not a statement of fact.

The Court: Objection sustained.

Mr. Foster: That is all, your Honor.

The Court: Just a moment.

Q. Where was this Holden press being operated? Was it in an open loft of the factory?

A. No; it was in a small building.

Q. In a small building? A. Yes, sir.

Q. Anyone else there with you besides yourself and Mr. Holden? A. Yes.

Q. How many people?

A. Well, I don't remember exactly. There was three of us in the party that went down to look at this, and there might have been others there. There was four or five.

(Testimony of Frank S. Hadfield)

Q. Were the three of you that went down together all engineers. A. No.

Q. By Mr. Foster: Why did you go to look at the press, Mr. Hadfield?

A. Well, Mr. Holden's nephew was employed in the same concern that I was in Cincinnati, and through correspondence [934] with Mr. Holden, his uncle, he conceived the idea that we could make a lot of money by installing the Martin method of making ice in the Central West, and we were to be given State rights to a large territory and going to make a fortune; so we went back to investigate the possibilities of this thing.

Q. Was the ice produced by the press transparent?

A. No. It was what we call tombstone or white ice, and therefore at that time was practically unsalable.

Mr. Foster: That is all, your Honor.

Recross-Examination

Q. By Mr. L. S. Lyon: I take it you turned the proposition down, Mr. Hadfield? A. Definitely.

Q. You did not make the fortune or any part of it out of it? A. No.

Q. Do you know what success Mr. Holden had with his press? Did he interest anybody else, to your knowledge?

A. Not that I know of. I don't believe it was a successful operation.

Mr. L. S. Lyon: That is all.

Q. By the Court: You mean commercially successful? A. Commercially successful.

Q. It made white ice?

A. It made white ice and there was no market for white [935] ice.

The Court: Any questions?

Mr. Miketta: No further questions. [936]

JAMES W. MARTIN,

called as a witness on behalf of defendants, being first duly sworn, was examined and testified as follows:

The Clerk: Will you state your name, please?

A. James W. Martin.

Direct Examination

Q. By Mr. Miketta: Where do you reside, Mr. Martin?

A. In Tuckahoe, New York.

Q. Where do you have your offices?

A. In New York City.

Q. Will you please state what technical training you have had?

A. I was educated in the high schools at Charlottesville, Virginia, and went to the University of Virginia for three years.

Q. You do not have a degree from the University of Virginia?

A. I do not.

Q. Are you a licensed professional engineer?

A. I am.

Q. In the State of New York?

A. Licensed in the State of New York.

Q. Will you please state whether you are a member of any national technical societies?

Mr. L. S. Lyon: I object to that as immaterial. I don't think these societies require anything except a payment of [937] dues, at least a good many of them.

The Court: It depends upon what kinds they are. Phi Beta Kappa and Sigma Chi require a good deal besides payments of dues. You may answer.

A. I belong to the American Institute of Chemical Engineers, and the American Institute of Chemists, American Society of Refrigerating Engineers, and some others, but they fall in the category of counsel; the others belong to the category that counsel brought out.

(Testimony of James W. Martin)

Q. By Mr. Miketta: Will you please briefly state some of your prior engineering experience?

A. If I may refer to my published record? I was with the DuPont Company for about four or five years when I left college; then went with the Tennessee Copper Company as superintendent of one of their plants.

Mr. L. S. Lyon: Can I see what you are reading, please?

A. Yes. It came out of "Who's Who in Engineering," all except the latter entries.

Mr. L. S. Lyon: Have you got a copy we can use?

A. I am sorry, I did not make one. That is just a copy I made.

The Court: You may use it ahead of the testimony and then let them have it.

The Witness: Yes, sir.

The Court: Is that agreeable?

The Witness: Agreeable; yes, sir. [938]

Q. By Mr. Miketta: Were you in the United States Army? A. I was during the last war.

Q. In what division?

A. I was in the ordnance department.

Q. The ordnance department. Have you had any experience with high-pressure gases? A. Yes.

Q. With what concern?

A. The Union Carbide and Carbon Company.

Q. For how many years?

A. Wait just a minute and I will check. For about four years.

Q. And what was your position with them?

A. I was in the research department at Cleveland, and then was in charge of the acetylene research division, which was a division of our research laboratory on gases.

(Testimony of James W. Martin)

During that duty I had some work to do in oxygen plants, which is a higher pressure than the acetylene.

Q. Have you been associated with the Dry Ice Corporation?

A. I was. In 1925 I became associated with the Dry Ice Corporation of America.

Q. And when did you terminate that association?

A. In November 30th, 1928.

Q. What has been your present or most recent work?

A. I was engineering manager for Sanders & Porter in the construction of a chemical warfare arsenal at Pine Bluff, [939] Arkansas, that occupied about a year and a half.

Q. Has that work been completed now?

A. The work has been completed; and as of the present time I am a consulting engineer of the Sanders & Porter's only client. The relation is now consulting engineer and client.

Q. Are you the James W. Martin whose name appears as inventor of United States patent No. 1,659,434?

A. I am.

Q. And when did you first construct and operate a snow tank of the type shown in Exhibit B, patent 1,659,434?

A. Approximately May of 1925.

Q. And where was it operated?

A. At the Maspeth plant of the Liquid Carbonic Company, Maspeth being a section of Long Island City.

Q. For how long a period of time did you operate snow tanks at the Maspeth plant?

A. From May, 1925, until the summer of 1926.

Q. Did you move your operations somewhere else at that time?

A. Yes.

(Testimony of James W. Martin)

Q. And where?

A. We moved the operations from the Maspeth plant to the Long Island City plant of the General Carbonic Company, which was located at Sixth Street and East River in Long Island City. [940]

Q. How long did you conduct your operations there?

A. Until the following summer.

Q. And then where was the production unit moved?

A. The production unit was then moved to Yonkers, in the Syrup Products Company plant. They were manufacturers of alcohol and we obtained the gas from the fermentation of molasses.

Q. I take it that during this entire period from about in the spring of 1925 on you were associated with the Dry Ice Corporation, is that correct?

A. I was, from 1925 to 1928.

Q. Will you please generally describe your snow tank as shown in Exhibit B? [941]

A. It was a cylindrical vessel, double-walled; that is, there was a cylinder within another cylinder, and the liquid carbon dioxide entered the inner cylinder through a nozzle. The carbon dioxide gas left the inner cylinder through a reinforced screen. It flowed in the annular space downward around the inner tank, between the inner and outer cylindrical vessels, and the exit was near the bottom of the outside cylinder. The snow was removed after it had been formed and the liquid carbon dioxide shut off. It was removed through a door which gave access to the inner cylinder.

Q. What did the gas do after being released from the snow tank?

A. The gas went back to the compressor through a heat exchanger, in which it exchanged its heat, if you

(Testimony of James W. Martin)

will, with the incoming liquid carbon dioxide. That heat exchanger had various forms. At the Maspeth plant the liquid line ran within a larger pipe, which was the exit carbon dioxide line, and at the Long Island City plant there was a heat exchanger constructed of copper tubes within a steel outer casing.

Q. Can you state the temperatures, or the temperature ranges, of the liquid carbon dioxide that was fed to your snow tank at Maspeth?

A. They vary considerably. I would say they varied from 40 degrees above zero—well, sometimes they were [942] below freezing, because they were frosted. There was no thermometer put on the line, so I can't give the definite temperatures.

Q. What maximum pressures did you obtain within the inner cylinder of the snow tank, Mr. Martin?

A. Again, there was no gauge. It would accumulate; pressures could be observed. Judging by the way the gas escaped from the doors when there was a leak in the gasket around the doors, or when you were first removing the door, I would judge that the pressures were in excess of 50, and not in excess of 100 pounds.

Q. Did you have any safety valves or pop valves on this outer tank or outer cylinder of the snow tank?

A. Yes, there were safety valves at 15 or 20 pounds in the outer cylinder in some of the installations.

Q. Did these pop valves or safety valves operate?

A. Not at all times. At times they froze up. They were not to be trusted.

Q. How much and where would you collect the solidified carbon dioxide that was fed into the snow tanks?

A. The snow was collected within the inner cylinder. After opening the door it was removed from the inner chamber and put into molds and tamped. A plate was put

(Testimony of James W. Martin)

over the snow within these molds, and these were placed on a hydraulic press and the snow was pressed into what is known as dry ice. [943]

Q. Was the equipment which you have described, the snow tank, the first equipment which you used in making solidified carbon dioxide?

A. No, the first used in making solid carbon dioxide was a tank set over a press. There was direct contact between the chamber and the pressing chamber.

Q. Have you any of the drawings, or have you made drawings showing the construction of that press?

A. I have, yes. I made it quite recently.

Q. Will you produce it, please?

A. I have this. I have made notes on it to refresh my memory as to dates and times.

Mr. L. S. Lyon: If your Honor please, I don't think the witness can make a memorandum 20 years after an event, and use that memorandum to refresh his recollection.

Mr. Foster: You misunderstood him.

The Court: He has not been asked to. When he is asked, it is time to object. All he has been asked for is a drawing that he has.

Mr. L. S. Lyon: Is this drawing being offered? If so, I would like to make an objection.

The Court: It hasn't been offered. It has not even been marked for identification.

Mr. Miketta: I would like to have that marked for identification at this time, your Honor.

The Court: It may be marked. [944]

The Clerk: Defendants' Exhibit L.

(Testimony of James W. Martin)

The Court: You may proceed.

* * * * *

Q. Will you please state what the apparatus consisted of?

A. The apparatus consisted of a cylindrical tank—

Mr. L. S. Lyon: I don't believe this witness is entitled to use this drawing to refresh his recollection. He is using it. He has it in front of him. He has testified that this drawing was made from memory, 20 years afterwards.

The Court: That is correct. Just describe it, without reference to this drawing.

Mr. Foster: May the record show that the witness has turned the drawing over?

Mr. L. S. Lyon: Yes.

A. The apparatus consisted of a cylindrical tank set over a hopper, which hopper fed into the compressing [945] chamber of a horizontal press. The liquid carbon dioxide was fed into the tank. Some precipitated toward the bottom of the tank, and into the chamber. [946] The carbon dioxide gas left the tank, and returned to the compressor system. The liquid carbon dioxide pipe was placed in the center of the exit gas pipe in such a way that it was in heat exchange relation.

Q. What was in the press? Was there a plunger therein?

A. Yes, the press consisted of the chamber into which the snow fell, and a plunger or pressing head compressing the snow, as the closure of the press. In order to start

(Testimony of James W. Martin)

the press initially we had a plate clamped onto the end of the press by a C-clamp. In the initial operation we would make a block of ice in the press by using this closure, and then the closure was removed and the block of ice formed the closure of the press. The press was used partly as an extrusion press. That is, some of the ice made was made by the extrusion of ice.

Q. Please explain what you mean by an "extrusion press"?

A. It is a press in which the ice extrudes from the open end of a press chamber, being retarded by friction which, in our case, was imposed by either friction devices set in the side of the press chamber, or by diminishing the dimensions of the press nose.

Q. In other words, you had a tapered outlet on the press at some time?

A. There was a tapered outlet on the press when operating it as an extrusion press.

Q. Ice would come out as a continuous long ribbon or [947] block?

A. Yes, it was slid out on a table, and then had to be sawed, but in one of the phases of it we placed a wedge-shaped block outside, and as the ice extruded, and attempted to climb this incline it was cracked off in approximately the length of brick we wished.

(Whereupon an adjournment was taken until 10:00 o'clock a. m. the following day, Wednesday, May 17, 1944.) [948]

Los Angeles, California, Wednesday, May 17, 1944;
10:00 A. M.

(Parties present as last noted.)

The Court: Are there any ex parte matters? If not, you may proceed.

Mr. Miketta: Mr. Martin.

JAMES W. MARTIN,

recalled

Direct Examination

resumed.

Mr. Miketta: I would like to have the clerk mark this copy of British patent 263,922, filed October 3, 1925, and entitled "Improved manufacture of carbon dioxide" as defendants' next exhibit for identification.

The Court: It may be so marked.

The Clerk: It is M.

[Note: Defendants' Exhibit M will be found in the Booke of Exhibits at page 1373 and 1554.]

Q. By Mr. Miketta: Mr. Martin, you have stated that about May of 1925 you began to use the snow tanks and that prior to that time you had employed a machine which you described and which is shown on Defendants' Exhibit L for identification, is that correct?

A. Yes.

Q. How do you fix the date upon which a machine of the character shown in Defendants' Exhibit L was placed in operation at the Maspeth plant?

A. It was the first job I worked on after coming with the Pressed Air Corporation, the predecessor corporation to [949] the Dry Ice Corporation. The working drawings were made during the latter part of January and

(Testimony of James W. Martin)

February, and the machines were completed during the month of March. As far as the month of March as being the date at which those machines were completed and put into the development stage, that is rather forcibly borne on my mind by the fact it was about that time that I sent for my wife to come up from Virginia to New York, and it was her first experience in New York and her first experience in an apartment; and one of our friends at Columbia had let us have quite a large apartment up there and my wife was a bit nervous about it, and during the time that she was trying to adjust herself to life under those circumstances, with a young child, I was having to spend the time out in Maspeth, which is quite a considerable distance from where I lived, and I worked Saturdays and Sundays and I had very little time to assist her in her readjustment. It has rather fixed it in my mind just at that period of around March in 1925.

Q. You mentioned the Pressed Air Corporation. Was that the name of the company before it was known as the Dry Ice Corporation of America? A. Yes.

Q. And that change in name occurred about what time?

A. In the spring of 1925 sometime. I didn't know exactly when it was changed over.

Q. What led you to build the machine shown in Defendants' [950] Exhibit L for identification?

A. When I came with the Pressed Air Corporation on January 16, 1925, I was given a diagrammatic sketch by Pierre E. Haynes, a chemical engineer from up Northern New York State, and this diagrammatic sketch, it was the sketch from which we worked and made up the working drawings for the snow tank and press that has been the subject of this exhibit.

(Testimony of James W. Martin)

Q. Do you have these sketches that you acquired from Mr. Haynes?

A. No. They were left with the Dry Ice Corporation. I expect they are in their files.

Mr. L. S. Lyon: I move to strike the last part.

The Court: That may be stricken.

Q. By Mr. Miketta: Do you have a pretty good recollection of what was shown on that sketch that you acquired from Mr. Haynes?

A. Well, it was not an awful lot shown. It was more diagrammatic than a true sketch, but it showed the tank, the snow tank. The inlet, the carbon dioxide inlet was at the top and came down into an annular space that was connected with the snow tank, on the same axis as the snow tank. The CO₂ gas outlet was in the outside shell of the snow tank. The snow tank was set over the top of a press and the press was shown—as I remember, it was shown just diagrammatically, that it, that it was a press. [951]

Q. Do you think you could make a rough pencil sketch similar to that which you received from Mr. Haynes?

A. It would help me a lot if you would let me do it rather than talk, because I think in sketches rather than in descriptions by words. Yes; I can.

Mr. Miketta: May I approach the witness stand, please?

(Witness diagramming on paper.)

A. I can't remember whether he showed a closure or not to the press. We had to put one on as soon as we started; but that was the type of sketch, merely indicating a plunger in the press, a snow tank, an inlet for the carbon dioxide, and an outlet for the carbon dioxide gas, and this annular inner tank which would permit the separation

(Testimony of James W. Martin)

of the snow, which was to fall down from this hopper, and the gas which went out the gas outlet.

Q. Will you please mark the element you have referred to as the snow tank, on this sketch, and which constitutes the press part?

The Court: Let that be received in evidence as explanatory of this witness' testimony, as defendants' next in order.

The Clerk: N.

[Note: Defendants' Exhibits N will be found in the Book of Exhibits at page 1375.]

The Court: C for identification, which you talked about yesterday, was not introduced in evidence, was it?

The Clerk: No.

Mr. Miketta: No, it has not been introduced in evidence. We would like to come to that later, your Honor. [952.]

The Court: I want L. Is L this patent just handed to me No. 263,922?

Mr. Miketta: Exhibit M.

The Court: Wasn't there a reference to Exhibit L?

Mr. Miketta: Yes, your Honor, Exhibit L is a rough diagram. It was referred to in yesterday's testimony, your Honor. It was a sketch very similar in appearance to this one, as I recall, a photostatic copy.

Mr. L. S. Lyon: That is the sketch marked for identification, which your Honor told me I should reserve my objection to until it was offered.

Mr. Morris: We would be glad to lend your Honor ours, if you would like to have it.

Q. By Mr. Miketta: I show you a copy, Mr. Martin, of the Haynes British patent No. 263,933, Defendants'

(Testimony of James W. Martin)

Exhibit M for identification, and ask you whether you find in that patent a diagram illustrating a combined snow chamber and press?

A. Yes, in the lower righthand corner of the drawing is a diagram which indicates the snow tank, with this inner annular space, and an inlet for the liquid carbon dioxide, and an outlet for the gaseous carbon dioxide from the snow tank. This snow tank was set directly over a hopper leading to the press.

Q. Is there any means shown for operating the press?

A. No, it is just the customary diagram for the press.

Q. The little round wheel, and the connecting rod [953] indicate what?

A. They indicate source of power.

Q. For moving—

A. For moving the pressing head, the upper platen.

Q. Is there any description of that portion of the drawing in the patent itself. and if so, will you read it, please?

A. I am reading from page 6 of patent 263,922, line 80. "From heat exchanger coil 35a the cooled liquid passes to valve 36 and is expanded in a suitable snow tower 37; and a substantial portion or approximately 50% is converted into solid carbon dioxide, which may be allowed to fall into a suitable press 38 and is compressed into blocks or ejected, or both. The unsolidified portion of the liquid passing through valve 36 changes to a gas and passes through the porous walls 39 of vessel 37 to pipe 40 and heat exchanging coil 41." [954]

* * * * *

Q. By Mr. Miketta: Do you know, Mr. Martin, whether the Pierre E. Haynes whom you met in 1925,

(Testimony of James W. Martin)

or thereabouts, is the same Pierre E. Haynes who is the patentee of the patent, Exhibit M?

A. No, I couldn't know.

Q. Where did Mr. Haynes reside, the one that you knew?

A. He worked at North Tonawanda, which is not far distant from East Aurora. I knew his office, but I did not know his home address.

Q. That is in New York?

A. In New York State, yes, near Buffalo.

Q. Is the drawing which appears on the Exhibit M, of the snowing and pressing equipment, which you have referred to, sufficiently complete for one skilled in the art to permit them to build a machine?

A. May I inquire which Exhibit M is?

Q. The patent before you. A. Yes. [955]

Mr. L. S. Lyon: I object to that—sufficiently complete to what?

The Court: Will you read the question?

(Question read by the reporter.)

Mr. L. S. Lyon: I object to that upon the ground that it calls for a conclusion that it is for the court to draw.

Mr. Foster: I think this man has shown familiarity with drawings, and diagrammatic drawings, and experience qualifying him to answer the question, your Honor.

The Court: I think maybe it would be better if you eliminate the words "for one skilled in the art," and it maybe would not be objectionable.

Q. By Mr. Miketta: If you were given a drawing, Mr. Martin, of the character shown in the lower right-hand corner of this British patent No. 263,922, would you be able to construct an operating machine therefrom?

(Testimony of James W. Martin)

Mr. L. S. Lyon: I object to that on the ground that it is irrelevant what this witness could do in 1944.

The Court: Yes, I think so. Objection sustained.

Q. By Mr. Miketta: Mr. Martin, is the drawing of British patent No. 263,922—by that I specifically refer to the lower righthand portion which you have described—sufficient to permit an engineer to build a machine therefrom?

Mr. L. S. Lyon: Same objection.

Mr. Foster: I think that the witness is qualified to answer, your Honor. He is an engineer. [956]

The Court: Yes, I think he is qualified to answer, but isn't the timing wrong? I, of course, don't know what has happened between the time of the publication of this drawing and the present.

Mr. Miketta: I will modify the question to refer as of 1925.

Mr. L. S. Lyon: Objected to upon the ground that that is a matter for the court, and not a proper conclusion for the witness.

The Court: Objection overruled.

A. That is about the same kind of diagram that Haynes gave me, and we constructed a press from it.

Mr. L. S. Lyon: I move to strike the answer as not responsive.

The Court: Yes, it may be stricken as not responsive. Now just read that question, Mr. Reporter.

(Question read by the reporter as follows: "Mr. Martin, is the drawing of British patent No. 263,922—by that I specifically refer to the lower righthand portion which you have described—sufficient to permit an engineer to build a machine therefrom, as of 1925?")

A. The answer is yes.

(Testimony of James W. Martin)

The Court: Change that question to an ordinary mechanic, and what is your answer, instead of an engineer?

A. If it is a good mechanic, the answer is yes.

Q. By Mr. Miketta: Is it customary, Mr. Martin, to work [957] from diagrammatic sketches before detailed pattern drawings are made?

Mr. L. S. Lyon: That is objected to as irrelevant and immaterial; no time, place or condition fixed.

The Court: I think so. Then I think it is a matter of common knowledge that people don't start at the top; they start at the bottom. They may have a dozen informal sketches before they do anything. It is like making a rough draft of a legal document. There are a few brilliant chaps that dictate it the first time, but I never was one of them.

Q. By Mr. Miketta: Mr. Martin, who actually built that machine for you? A. Eppenbach Incorporated.

Q. Did they build it from instructions which you gave them?

A. Some drawings, some sketches and some instructions.

Q. Some oral instructions?

A. Oral instructions; yes, sir.

Q. Do you recall how thick the walls of the press chamber were?

A. Yes. They were about inch steel castings, with flanges with two-inch faces.

Q. Would the construction and walls of that thickness be capable of withstanding considerable internal pressure?

A. It was so intended.

Q. How did you start operating the machine which appears [958] on Defendants' Exhibit L?

(Testimony of James W. Martin)

May I hand the witness a copy of that exhibit? I think the exhibit is before your Honor now.

Mr. L. S. Lyon: Exhibit L has not been received in evidence.

* * * * *

Q. By Mr. Miketta: Approximately when did you make that sketch, Defendants' Exhibit L?

A. May 12, 1944.

Mr. L. S. Lyon: I believe the witness may have mis-[959] understood the question. I would like to ask the witness a question, if I may.

The Court: You may.

Q. By Mr. L. S. Lyon: Is this the original sketch, Exhibit L?

A. Oh, no no. Then I was confused, if you meant that.

Mr. L. S. Lyon: I would like to have the witness answer the question.

Q. By Mr. Miketta: This sketch was not made in 1925? This is a sketch which you just made recently?

A. Yes.

Q. And you made that sketch from your recollection, is that correct?

A. Yes; and to aid my recollection.

Mr. L. S. Lyon: I would like to know when "recently" was. I think we are entitled to know when this sketch was actually made.

Mr. Foster: He said May 12, 1944.

Mr. Miketta: May 12.

The Court: He said May 12, 1944.

(Testimony of James W. Martin)

Mr. L. S. Lyon: I do not believe that the sketch can be used to refresh his recollection. It is just a picture of his recollection.

The Court: It cannot be used to refresh his recollection. It may be admitted in evidence for the purpose of illustrating the testimony of the witness, and for no other purpose. [960]

Mr. Miketta: That is correct, your Honor. I offer it for that purpose.

The Court: It may be received as Defendants' next exhibit into evidence for that purpose only.

Q. By Mr. Miketta: The machine which you have described and which is shown on Defendants' Exhibit L was actually placed in operation, is that correct?

A. Yes, sir.

Q. You have testified, I believe, that that was about March of 1925?

A. Yes; the latter part of March, 1925, to the best of my recollection.

Q. By the Court: Where? Refresh my memory.

A. In Maspeth, Long Island, which is a part of Long Island City.

The Court: I know you have testified to that.

Q. By Mr. Miketta: You were leasing some space there from Liquid Carbonic, is that correct?

A. Yes. The arrangement was that we purchase the liquid carbon dioxide from Liquid Carbonic Corporation and in return for this purchasing of liquid carbon dioxide they permitted us to use the space within their building. There was no lease. I am trying to bring out there was no lease or anything of that kind involved.

(Testimony of James W. Martin)

Q. What was the size for the cross-sectional dimension of the pressing chamber, if you recall? [961]

A. 3-1/2 x 3-1/2 inches.

Q. And how did you initiate or start the operation of the machine which you described and which is shown on Defendants' Exhibit L?

A. We put this plate or plug over the end of the compression chamber and held it in place with a C clamp.

Q. Then what happened?

A. Then we would snow into the tank; snow would fall down through this hopper into the path of the piston. When we had a sufficient charge in there, which we found out by experience and timing, we would start the press up and compress it.

Q. Against that head or—

A. Against that C clamp; yes.

Q. Will you please indicate on Exhibit L that part which you referred to as the C clamp?

A. Shall I indicate it in red pencil, or just indicate it?

Mr. Miketta: Could we have the witness mark it, please?

(Witness marking in red pencil.)

Mr. Foster: May I approach the witness, your Honor?

The Court: Yes.

Q. By Mr. Miketta: And after a block had formed against that C clamp or head which you have indicated, was that C clamp removed?

A. In one of the types of operation it was so removed, the block acting as the closure, the block of ice acted as a [962] closure.

The Court: Read that question, please.

(Testimony of James W. Martin)

(Question and answer read by the reporter.)

The Court: What I was getting at actually was "one type of operation." What do you mean by that?

A. We operated the press, sir, in two ways. One way was as an extrusion press.

The Court: That is an awful big word.

A. Well, extrusion press means that you will constrict this opening. We put a nose piece on that was tapered. Now, if you restrict that opening in that way, then as this operates and as you snow in, this will add increments of ice onto the back end of it and squeeze the front end out of the press.

Q. By Mr. Miketta: Could you indicate the position of the restriction to which you have just referred by dotted lines on Exhibit L?

A. It would then have to be superimposed on top of this clamp. If you wish, I will extend it.

Q. Would you indicate it in dashed lines or dotted lines? A. Yes (marking on diagram).

The Court: A little heavier.

Q. By Mr. Miketta: Will you please apply the words "nose piece" to what you have just drawn?

A. (Witness marking).

Q. So that an extrusion press apparatus performed the same way that a tube of toothpaste does; in other words, it [963] extrudes a continuous ribbon or bar of material? A. Yes.

Q. Now, did in both types of the operation to which you have referred—let me modify that question. In both types of operation to which you have referred did the piston or plunger eject the block from the pressing chamber or the ribbon? A. Yes.

(Testimony of James W. Martin)

Q. And when you were employing this extrusion method how did you separate the continuous bar of solidified carbon dioxide into blocks?

A. It was extruded out on a table. One method was to have a man with a saw and manually saw it into blocks as it came out. We tried to get 8-inch blocks, 8-inches in length. The other method was to put a slightly inclined wedge-shaped piece of metal on the table and in front of the mouthpiece so that the ice, as it extruded, was forced to go up the incline and it would crack into blocks of approximately 8 inches in length.

Q. And all of these operations were carried out at the Maspeth plant?

A. At the Maspeth plant of the Liquid Carbonic Company.

Q. And before you installed any snow tanks there, is that correct?

A. It was before we installed the snow tanks, and the operation continued after we had first installed the snow [964] tanks. It was an over-lapping.

Q. Without referring to any of the previous drawings or exhibits, will you state what changes or modifications were made in the equipment which you state was first built and which was shown on Defendants' Exhibit L?

A. A first change was to take the snow tank off the press down to the hopper. This was done because the snow tended to stick to the sides of the snow tank. It seemed to have an electrical charge on it that makes it cling to the sides of the snow tank. So we took that off and we put the carbon dioxide nozzle down at the base of this cone—conial structure that we had on top of the press, placing a flange over the top of the cone, over the

(Testimony of James W. Martin)

large end of the cone, and attaching the carbon dioxide outlet to the center of this flange. The next—

Q. Pardon me. Could you sketch, make a rough pencil sketch of the apparatus after that change was made which you have just described?

A. (Witness diagramming on paper).

Mr. Miketta: May I have the court's permission to approach the witness?

The Court: Yes.

Mr. Foster: May I also, your Honor?

A. That was the change that I have just described, the diagram marked—I will mark it "1".

Q. By Mr. Miketta: Did you make any changes in the actual [965] tion of the pressing plunger in the press itself, or was it the same as you had before?

A. No; the press was the same.

Q. What additional changes—

Pardon me, may I have that introduced into evidence, your Honor?

The Court: It may be received as defendants' next in order only for the purpose of illustrating the testimony of this witness.

The Clerk: O.

Q. By Mr. Miketta: Did you make any further or additional modifications or changes in that apparatus?

A. Yes. The next step was to take off the conical hopper and bring the outlet pipe down to a spool piece which was an adapter between the press chamber and a 6-inch pipe, 6-inch round at one end and oblong slot at the other end 3-1/2 x 8 inches long which fitted over the press chamber.

(Testimony of James W. Martin)

Q. What was the function of that 6-inch pipe to which you referred?

A. That was to carry the carbon dioxide back to the compressor. A screen was then placed between this adapter and the 6-inch outlet pipe and liquid carbon dioxide was introduced in the lower part of this adapter.

Q. What was the purpose of the screen, Mr. Martin?

A. Was to force the snow to go downward into the press rather than back up through the gas outlet. [966]

Q. Could you make a pencil sketch of this last described modification?

(Witness diagramming on another piece of paper.)

Mr. Foster: May I see the sketch, your Honor?

A. That is a diagrammatic sketch of the next step. There was still a subsequent step to this before the machine was smooth-running as it later became.

The Court: Mark that "2" and put the next one down here for "3," and I won't have so many exhibits.

A. Yes, sir. The next step involved the replacement of the horizontal screen with a wedge-shaped screen designed to resist pressure. This screen, as shown in Exhibit 2 or diagram 2, tended to burst from the snow pressure from within.

Q. By Mr. Miketta: What was the screen made of?

A. The first screen was made of wire mesh with a cloth on the pressure side. (Witness further diagramming on same piece of paper.) At this time we put the carbon dioxide inlet in the side of the chamber of the press.

Mr. Morris: May I see that also, if your Honor please?

(Testimony of James W. Martin)

The Court: Surely. Any of you may come up here if you want to.

Q. Will you mark that inlet line?

A. In the other view of the screen, the screen was a triangular shape. This screen, if you looked at it from this angle, would be shaped so fashioned.

Q. By Mr. Miketta: In other words, it was almost like a [967] wedge?

A. It was wedge-shaped; pyramidal-shaped, and this screen consisted, in final form, of a punched plate, in order to give strength to the wire mesh screen. I think it was a bronze screen. That was on the pressure side of the punched steel backing.

Q. Will you indicate the block outlet on this last diagram? A. I will call it "dry ice outlet."

Q. Will you apply the No. 3 to that figure?

A. That has been done.

Mr. Miketta: I would like to introduce that in evidence for the purpose of illustration.

The Court: It will be received for that purpose only, for the purpose of explaining the testimony of this witness, as defendants' next in order.

The Clerk: P.

Q. By Mr. Miketta: How was the pressing plunger driven in all these modifications?

A. It was motor-driven, from a motor to a large pulley, so as to gain power.

The Court: There was no change in that phase of it, was there? A. No, sir.

(Testimony of James W. Martin)

Q. By Mr. Miketta: When was this last modification which you have indicated as Fig. 3 of Exhibit P completed, to the [968] best of your recollection?

A. The first time we put a pyramid in there, that is, a pyramidal-shaped screen in there was, I think, the last of April, or the first of May. The last one we put in was around the middle of June; so it was over that period that I know we were using it.

The Court: In what year? A. 1925.

The Court: What about the change or modification No. 2?

A. That was the modification that I was describing, sir.

Q. 2 and 3 at the same time, approximately?

A. No; I beg your pardon. Diagram 2, immediately preceded the scheme as shown in diagram 3. The first would burst the screen, and I immediately changed the screen.

The Court: Change 1?

A. Change 1 occurred early in April.

The Court: Of the same year?

A. Of the same year, 1925.

Q. By Mr. Miketta: As soon as you put in this pyramidal screen you moved the liquid injection inlet into the body of the press?

A. Into the press chamber, in front of the piston.

Q. Why did you move it down there?

A. We wanted to form ice down in the press chamber. If we had left it up in the adapter press it would have impinged it against the screen, and would have tended to freeze the [969] screen up so the gas wouldn't go up.

(Testimony of James W. Martin)

Q. You, in effect, were almost forced to move it down?

A. We were forced to move it down, yes.

Q. Was this last modification actually constructed and operated before you put snow tanks in at the Maspeth plant?

A. The first of it was in operation before we put the snow tanks in. To the best of my recollection it was around the first of June that we started to put in the first snow tank.

Q. Mr. Martin, referring back to this period before June of 1925, was there a ready market for carbon dioxide in solid form?

A. No, it was the first time that most people had seen dry ice, when this first dry ice in this little press was sold. That was the first time it had ever got into commercial use, that I know of, as ice.

Q. Did you have any problems, so far as distribution and packaging, and the like?

A. We had many problems. One problem was that people would handle the ice and freeze their hands, and thought it was burning them. The first problem was to convince people that it was not a chemical to be feared. There was no market for it, because it had never, at least in this country, become an article of commerce before, so it was a plaything. We had to teach the people to use it.

The Court: For what? [970]

A. Use it for refrigerator purposes.

The Court: At that time?

A. At that time, yes, in the spring of 1925.

(Testimony of James W. Martin)

Q. By Mr. Miketta: You spoke of blocks measuring, I think you said $3\text{-}1/2 \times 3\text{-}1/2 \times 8$ inches long. How were those blocks used?

A. They were used to put into ice cream cabinets that we were designing and building at the same time. These ice cream cabinets were adapted for ice of this particular sized block, in a bunker which ran the length of the ice cream cabinet, back of the ice cream cans on top of the cabinet. The cans were built to fit this size block. Other ice was used in Eskimo Pie jars; a vacuum jar, in which a small section of these $3\text{-}1/2 \times 3\text{-}1/2$ blocks was placed in the top of the Eskimo Pie jar, and the ice was wrapped in paper, and it served to keep the Eskimo Pie at a temperature below freezing. Those were the first uses.

Q. Did you modify the size of the blocks as business developed?

A. Yes, along in the late spring and early summer the first big order came from the Breyer Ice Cream Company, of Philadelphia. We had to ship ice down to Philadelphia, and then ship the ice cream from Philadelphia through to New York in what was known then as a hardening box, a big insulated box. These boxes had a 7-foot cube inside, and just fitted on the truck. These small blocks were not well adapted for [971] that kind of work. It was then we started to seriously consider the snow tank in larger blocks.

Q. What year are you referring to?

A. That was about June, 1925.

Q. Did you make any round cylinders or discs of dry ice also?

A. Yes, just after this use of dry ice by the Breyer Ice Cream Company we were so fortunate as to get the

(Testimony of James W. Martin)

business of the Schrafts Stores, chain ice cream and confectionary stores, in New York, and they, through the instance of George Kusack, who was salesman of the Dry Ice Corporation in those days, they started to use a small hand carton to sell the product. There was an inner carton, and an outer carton, and between the two cartons was a little disc filled with ice, about 3 inches in diameter and 7 inches high, and they punched a hole in the outside carton so it wouldn't blow up. That constituted the first major use of dry ice. [972]

The Court: You mean that you punched a hole—

A. Yes, punched a hole in the carton.

Q. By Mr. Miketta: In what machine did you make these three-inch discs?

A. We had to borrow an old toggle press, and we got a section of three-inch pipe, and cut them up to about six or eight inches in length, I believe it was; maybe a little longer than that; and packed the snow in these sections of pipe, and put them in the toggle press, and eventually arrived at dry ice by pressure in these molds.

Q. Did you already have your snow tanks in at that time?

A. We had to put them in in quite a hurry at that time, because Schrafts was also wanting these little discs of dry ice, and they had to carry the ice cream from the factory to the stores, and they demanded larger blocks, and on top of that they wanted them for display purposes. That attracted a large crowd outside the window; they put the large blocks in the window, and then let it stay there and melt. One of the blocks would last about 30 hours, just sitting in the window. It was a good advertising scheme.

(Testimony of James W. Martin)

Q. Before you started using snow tanks, making three-inch discs, to which you have referred, who was present at the Maspeth plant working with you on those?

A. Walter L. Hood was production manager, W. H. [1973] Fitzpatrick was engineer, and there was a man named Underwood, the draftsman, and Mr. Sherwood who was engineer. Those four men I remember.

Q. All of those men saw the machine which you have referred to as illustrated in Exhibits O and P?

A. Yes.

Mr. L. S. Lyon: I think that is too general, your Honor, and calls for a conclusion.

The Court: Yes, I think it is a little general.

Q. By Mr. Miketta: Were those men present at the time that the machine shown in Exhibits O and P was in operation?

Mr. L. S. Lyon: I object to that as too general. I don't think we ought to be charged with testimony 19 or 20 years after the event of such a general nature as this.

The Court: I am inclined to agree with you. I think it is important to particularize. I think they are entitled to specific information as to it, even though it takes a little time.

Q. By Mr. Miketta: Mr. Martin, did any of the gentlemen to whom you have referred have any duties in connection with the machine shown on Exhibit P?

A. They did.

Q. Will you state what duties, for example, Mr. Hood performed in connection with the machine illustrated in Exhibit P? [1974]

A. He was in charge of production. He supervised the operation of the machine.

(Testimony of James W. Martin)

Q. During what period of time was he so engaged?

A. Hood came with the Dry Ice Corporation—

Mr. L. S. Lyon: I object to that as not responsive to the question.

The Court: Yes. During what time was he such engineer? Give us the dates.

A. April. Do you limit it to what he was doing?

Q. By the Court: When was he in charge of the operations indicated by P?

A. April through June, 1925.

Q. What year was it that Schraffts put the blocks of dry ice in the windows in New York?

A. In the summer of 1925.

The Court: It is strange; I was curious, and I went down with my brother, who is an engineer, and took a look at it, as a matter of interest. I remember it very well. And he told me about what it was, so far as he knew. I think there was an article on it in one of the New York papers, Sunday edition.

Mr. L. S. Lyon: That was the ice itself?

The Court: A block of ice. I can't remember the year, but it was right along in there; I know that.

Q. By Mr. Miketta: You referred to a toggle press that had been used by Pressed Air, and which was in turn [975] used in making three-inch discs. Do you know what Pressed Air was employing the toggle press for?

A. Yes. Pressed Air was in the business of making accessories for the automobile trade. They made little automobile jacks, that were motivated by the pressure within a small tube of carbon dioxide. They also used the same tire tube, as it was called, to inflate tires on the road; something to carry with you, to keep you from

(Testimony of James W. Martin)

having to pump air into the tires manually. They used this press to press some of the parts that went into this assembly.

Q. Was that press employed by you in making these three-inch cylinders, before you made ten-inch blocks?

Mr. L. S. Lyon: I haven't heard the witness testify to making ten-inch blocks, your Honor.

The Court: I thought he said later, at the instance of the ice cream people, they wanted larger blocks to take care of the trucking of ice cream, and they made ten-inch blocks.

A. Yes, they made ten-inch blocks. It was those blocks you saw in the window.

Q. By Mr. Miketta: While we are on that subject, Mr. Martin, how did you make your ten-inch block?

A. The ten-inch block was made on the snow tank, as described yesterday, when we were discussing the Martin patent. Snow was dug out of these snow tanks, the chunks [976] of snow broken up with tamps, and a loose-fitting plate was placed over the snow in these molds and the molds pressed on a hydraulic press, and compressed about four inches down to approximately ten-inch cubes.

The Court: There were three separate operations: The snow chamber, the tamping operation, and the press?

A. Yes, sir.

Q. By Mr. Miketta: Where did you get the hydraulic press?

A. It was a second-hand Watson-Stillman press. First we operated it with a hand pump, to get our hydraulic pressure.

(Testimony of James W. Martin)

Q. Incidentally, how much did you pay, or what was the cost of the snow press which is shown on Defendants' Exhibit L, which was the first form of the combined snow tank and press?

Mr. L. S. Lyon: I object to that upon the ground that no proper foundation has been laid. I don't know whether this witness paid for it; I don't know whether he kept the records, or how he would know 19 years later.

Q. By Mr. Miketta: If you know.

The Court: Will you read the question?

(Question read by the reporter.)

Mr. Miketta: Let me rephrase it, your Honor: Do you know, Mr. Martin, what was paid for the press built for you by Eppenbach, and by that I refer to the press shown [977] on Defendants' Exhibit L, which is the first form?

A. Approximately \$2700.

Mr. L. S. Lyon: I object, unless he answers—

The Court: Answer yes or no. A. Yes.

Mr. L. S. Lyon: I would like to know how he knows.

The Court: You may examine him.

Q. By Mr. L. S. Lyon: Did you make the payment yourself?

A. I took the check over personally, to the best of my memory.

Q. Do you know whether you did or not?

A. That is the best of my memory and belief. That is all I can give now.

Q. Do you remember the amount of that check, of your own independent recollection, 19 years later?

A. I remember that it was between two thousand—

(Testimony of James W. Martin)

Q. Just answer the question.

A. May I have the question, please?

(Question read by the reporter.)

A. Of my own independent recollection I remember it, yes.

Q. I will ask the witness to answer the question yes or no, your Honor. He knows whether he remembers or not.

The Court: He may answer it, and then explain his [978] answer. A. Yes, I remember.

Q. By Mr. L. S. Lyon: How much was the check?

A. Approximately \$2700.

Q. What bank was it drawn on?

A. There you have got me. I don't know.

Q. You remember definitely walking over and handing that check to somebody in this other concern?

A. To the best of my ability, I am trying to remember back 18 years; yes, to the best of my memory.

Q. To whom was the check payable? A. Eppenbach, Incorporated. I build that up from the fact that we got the press from Eppenbach, Incorporated, and it was logical that it was.

Q. Do you remember who it was payable to?

A. No.

Q. Who did you hand it to?

A. One of two men, if that is permissible.

Q. Are you just trying to reason this out, or do you actually remember?

A. I would have to analyze that. I handed the check to the man who was in charge at the time. There were two brothers. Which of the brothers, I don't know.

Mr. L. S. Lyon: I think that is sufficient, your Honor.

(Testimony of James W. Martin)

Q. By Mr. Miketta: I show you Plaintiffs' Exhibit 5, [979] and ask whether you recognize the equipment there shown? A. Yes, I do.

Q. Will you please state what the mechanism on the left-hand side of the photograph is?

A. That is the toggle press we were just talking about.

Q. Do you see any other equipment there that you recognize?

A. Yes, the Watson-Stillman press, over against the wall in the right-hand corner. No pump is shown, because I think at that time we were using a little hand pump. I recognize the snow tanks, with their characteristic doors and safety valves on the top. Down under the toggle press you will notice some round cylinders, which would indicate that the picture was taken just after we had been making these little cylindrical blocks for Schraffts store—carry-out packages.

Q. That picture was taken at Maspeth?

A. The surroundings would certainly lead you to believe that, and the fact that these round cylinders were in the place would lead me to believe that was at Maspeth, because that was where we made these up for the Schraffts stores.

Q. How do you fix the date, Mr. Martin, on which you first started to make ten-inch blocks, and these three-inch discs? Have you any incident in mind, or can you definitely fix the period when you first started to make snow in snow [980] tanks, and three-inch discs and ten-inch tubes?

A. It was prior to July 4th, because around the 4th of July you have a big surge of business in the ice cream and confectionery stores.

(Testimony of James W. Martin)

Q. What year was that?

A. 1925. It was in anticipation of this business. The business kind of creeps uphill until July 4th. We saw that we had to make ice faster than we could make it on two snow presses we had out there, in action.

Q. Did you have more than one snow press prior to that time?

A. Yes, we had three snow presses ordered and delivered eventually, but one of them was in operation; the other was just sitting outside of the house, and I think the third one was inside the house, but it had not been hooked up until we needed it at last.

Q. Referring again to your snow tanks and the three-inch discs and blocks, how many days or months before this 4th of July of 1925, did you actually have the snow tanks put in operation?

A. I would say it was about a month. That's the best I can remember; approximately a month; maybe it was six weeks, but in that neighborhood.

Q. Were you already supplying the Schraffts stores with the discs immediately prior to the 4th of July?

A. We were. [981]

Q. Of 1925? A. Of 1925, yes.

Q. I think you mentioned some specific use of these ten-inch blocks. What was that use?

A. The first ten-inch blocks were made to supplement the small three and a half by eight-inch blocks. When we got the order from the Breyer Ice Cream Company to ship down to Philadelphia, we shipped a lot of little small blocks, but they used so many of them with a large order—between 2000 and 3000 pounds, and took such a lot of them, it was at that time we started to make the 10 by 10.

(Short recess.) [982]

(Testimony of James W. Martin)

Q. You have mentioned some customers and uses for this 3-1/2 x 3-1/2 blocks, Mr. Martin, and I think you specifically referred to their use in ice cream cabinets. Can you state who else purchased or who else used or how these blocks were used in the spring of 1925?

A. There were several of these confectioners stores. I think one of the first was Boulevard Pharmacy up in Corona.

Q. Was that in New York?

A. That was in Long Island City, in Long Island, anyhow. Another one, that gained very much notoriety, was a fish counter up at the Haufbrau House, up on upper Broadway. These blocks were used to keep the fish cool, lobsters cool in the Haufbrau House, and the old Haufbrau House was quite famous and so many people saw it in that use.

The Eskimo Pie, there was quite a number of deliveries to Eskimo Pie venders. About that time the Eskimo Pie started to—I think it was in the summer of 1925—started, to have these little boxes that carry Eskimo Pies for vending in the ball grounds; and they used this size of block ice, this 3-1/2 x 3-1/2. All of those uses used the 3-1/2 x 3-1/2-inch block; and those were uses, with the exception of this last one with the Eskimo Pie sale at the ball parks, was prior to this 4th of July peak in which we went over to the large blocks, 4th of July, 1925.

Q. The blocks which you made on the presses or on the equipment illustrated on Defendants' Exhibits L, P, and O were [983] all merchantable, were they not?

A. Yes; they all were. We sold all the product we made on it.

(Testimony of James W. Martin)

Q. What did the ice look like or the blocks of ice?

A. Sometimes it was white, which we know of now as snow ice; sometimes it was translucent, which we know now it is as triple point ice. The customers in those days did not like the triple point ice much because it was kind of gray, that is, when the frost came on it, the white frost came on it, why, you saw the white frost against a little darker background which looked grayish, and for some reason or other they didn't like that. I suppose they had displayed it so much that—

Mr. L. S. Lyon: I don't think this witness should depart from the questions and bring in what other people thought, and no foundation laid.

The Court: Yes; that may be stricken. Try to answer the express question and then stop, and then we will get along faster.

The Witness: Yes, sir.

The Court: Tell me this: You say sometimes it was a white, opaque ice and sometimes it was the darker, translucent ice. You don't mean that one block would be one and one would be another, but it came in series, is that it?

A. Yes, sir. If you left the liquid on too long, left the liquid valve open for a longer period, you would very [984] frequently get the translucent blocks; but if you just cracked the valve, that is, released it slightly into the path of the piston, why, you would get the snow ice under those conditions. It could be controlled to some extent by the manual operation of that valve.

(Testimony of James W. Martin)

Q. By Mr. Miketta: At that time—and I refer to the spring of 1925—did you know the physical properties of liquid carbon dioxide and the triple point thereof?

A. Yes. Haynes left me a triple point curve to guide me on that.

Q. Where in the Maspeth plant was this press and all of its modifications that you have been referring to, namely, those modifications shown on Exhibits L, P, and O?

A. It was—I can't give whether it was the—I think it was the southeast corner of the building, but I can't be sure of that; but it was on the ground floor of the plant and faced a big double door, which I think gave out to a railroad track and a road. The press was—

Q. Was it in a separate room?

A. Oh, no; it was in the same. It was in the same room with the compressor and the filling stand for the cylinders, and it was a separate room for empty cylinders. It was in a large room.

Q. Was it available to other workmen in the plant?

A. Oh, yes, yes. They had free access in that room.

Q. By the Court: It was in the open loft? [985]

A. It was an open building; yes, sir.

Q. By Mr. Miketta: Did you have any visitors at that plant?

A. Oh, yes; were were cursed with visitors. They came all the time.

Q. And that is during the spring of 1925?

A. Yes, yes. This was new—I beg your pardon. I should not advance anything.

Q. Pardon me. Did you give any instructions to keep visitors out? A. No.

(Testimony of James W. Martin)

Q. Did you know Mr. McLaren at that time?

A. Only by reputation. [986]

* * * * *

Q. By Mr. Miketta: When did you move the equipment for producing solidified carbon dioxide to the plant of the General Carbonic at Sixth and East River?

Mr. L. S. Lyon: The same objection, your Honor.

The Court: Objection overruled.

A. We moved to the Sixth Street and East River plant in the last of the summer or in September of 1926.

Q. By Mr. Miketta: And how far was that from your Maspeth plant?

Mr. L. S. Lyon: The same objection as made to the same question when it was previously asked.

The Court: Objection overruled.

A. Approximately three miles.

Q. By Mr. Miketta: Are both those places part of Long Island City?

A. I believe it is; yes. That is my belief.

Q. I think you referred to the price paid for the first press made for you in 1925. Do you remember the price that was paid for the second and third presses to which you have referred?

A. They were a little less. I think that they were in excess of \$2,000, but not much in excess of \$2,000.

Q. How does that price compare with the price or cost of [987] a snow tank?

A. Oh, a snow tank costs—well, the first ones cost around \$400. They got cheaper as we learned better how to make them, or, rather, as the vendors learned better how to make them.

(Testimony of James W. Martin)

Q. Why did you go to a snow tank instead of making or having made for you a large press similar to that shown on Exhibits L, P, and O?

A. Well, one thing was the time element. We were in a big hurry to get this ice, and snow tanks, we could make those in three or four days. We had the hydraulic press, or was able to get it. I have forgotten whether we owned it prior to that or not, a second-handed Watson and Stillman press. The other thing, though, and probably the main thing, was Mr. August Heckscher was putting up the money for this development work and he didn't like to put up money much.

Q. Who was Mr. August Heckscher?

Mr. L. S. Lyon: I object to that statement as incompetent.

The Court: That may be stricken.

Q. By Mr. Miketta: Who is Mr. August Heckscher?

A. Mr. August Heckscher was a philanthropist. I think he had greater fame as a philanthropist than anything else. I have forgotten how he got his money, but he lived in New York.

Mr. L. S. Lyon: I object to this as immaterial.

The Court: Objection sustained. [988]

Q. By Mr. Miketta: What was Mr. August Heckscher's connection with the Pressed Air Corporation or Dry Ice Corporation of America?

A. He was president.

Q. And did you know the cost of a press sufficient to press 10-inch blocks?

A. At that time we knew what it cost us to make this $3\frac{1}{2} \times 3\frac{1}{2}$, and we extrapolated about what it would cost for a 10 x 10 press.

(Testimony of James W. Martin)

Q. What was your estimate?

A. We estimated it was going to cost us around \$10,000.

Q. Do you recall the total production of solid carbon dioxide in block form which you manufactured during 1925?

A. Approximately 135 tons.

Q. When you moved your equipment to the plant of General Carbonic Company at Sixth Street and East River who was at such plant?

A. The man in charge of the plant was Mr. McLaren, Malcolm McLaren.

Q. And who were some other officers or officials of General Carbonic at such time?

A. Mr. George Petty, I think, was president or vice-president. He was the man that we had to see to make arrangements—that I saw to make the arrangements for coming over to Sixth Street and East River. Mr. Cole was introduced to me as the engineer, Mr. Harry Cole. [989]

Q. Now, did you move the combined snow-forming and block-pressing machines which you had down at Maspeth over to the plant of General Carbonic?

A. To the best of my recollection—

Mr. L. S. Lyon: I would like to have the witness testify. Answer the question.

Mr. Miketta: I object to the interruption, your Honor. I think the witness was answering the question.

The Court: I think so. Read the question.

(Question read by the reporter.)

A. To the best of my knowledge and belief, we moved everything we had from over at Maspeth but we did not

(Testimony of James W. Martin)

install—I mean we moved it from Maspeth over to Long Island, to the Long Island City plant of the General Carbonic Company, everything we had out at Maspeth.

Mr. L. S. Lyon: I move to strike the answer as not responsive to the question.

The Court: The only thing that may be stricken is “but we did not install it.” That portion was not responsive. The balance may remain.

Q. By Mr. Miketta: Did you install the snow-forming and pressing machines?

The Court: It may be more inclusive than the question, but it covers the question all right.

Mr. L. S. Lyon: He has not answered whether in 1926 he had this equipment. He just says he moved everything they had. [990] He was asked if he moved certain equipment, and I submit that is not an answer, although your Honor has ruled.

The Court: I think he testified he had the equipment. If he has not testified that he had the equipment, I may rule that way. Ask him that question. I may be in error. I thought he had testified to that.

Q. By Mr. Miketta: At the time you moved your equipment to the plant of the General Carbonic, Mr. Martin, did you have that combined snow-forming and pressing equipment which you have illustrated on Exhibits P and O?

A. Now, wait a minute. Exhibits P and O, which are those? I don't wish to be confused.

(Mr. Miketta exhibiting documents to witness.)

A. Yes; we had those.

(Testimony of James W. Martin)

Q. Did you install that equipment at the plant of General Carbonic? A. No.

Q. What did you do with that equipment?

A. It set out in the yard along with a lot of other scrap equipment. The yard was between the building in which we set up the snow presses and the East River.

Q. Was that equipment boxed in or protected from the weather or covered up? A. No; it was open.

Q. It was visible to people around the plant?

A. That's true. [991]

Mr. L. S. Lyon: Object to that as immaterial.

The Court: Overruled.

Q. By Mr. Miketta: Did you continue the production of solidified carbon dioxide and the manufacture of blocks at the plant of the General Carbonic Company?

A. Yes; in the snow tanks.

Q. Yes. A. Yes.

Q. And just to clarify the record again, I believe you stated that that move to the Sixth Street and East River plant occurred about in September of 1926, is that correct?

A. Approximately at that date. We moved—whether it was the equipment, if I may clarify my point here, if it was not the equipment that I have described as that first installed, it was equipment which was purchased and replaced that first installed. In other words, possibly the first snow tanks may have worn out and we replaced them with new—that I can't recall—and equipment similar to that that we first installed was brought over there.

Q. And your operations at the plant of General Carbonic were initiated about September of 1926?

A. Yes; to the best of my memory.

(Testimony of James W. Martin)

Q. While you were conducting your operations at the General Carbonic plant did you discuss the manufacture of solid blocks of carbon dioxide with others?

A. Yes. [992].

Q. Will you please name them?

A. Well, of course, with my associates, but also with the superintendent of the plant, Mr. McLaren.

Q. Why were you discussing that with Mr. McLaren?

Mr. L. S. Lyon: I think that is immaterial, your Honor.

The Court: Objection sustained.

Q. By Mr. Miketta: Will you give the substance of your discussions with Mr. McLaren?

A. He came up and Mr. McLaren objected to the amount of carbon dioxide we were wasting; that when you opened the doors of these snow tanks considerable carbon dioxide gas comes out. When you press the block in these presses, why, there is a big evolution of gas. Mr. McLaren was needing this gas to make a liquid for cylinders and he quite rightfully complained about the amount of gas we were wasting.

Q. About what time were these conversations taking place? A. Well, it was soon after we got there, as soon as he saw how wasteful our process appeared to him.

Q. That would be shortly after September of 1926?

A. It would.

Q. Who else was present at those discussions with Mr. McLaren? A. Mr. Hood.

Mr. L. S. Lyon: If your Honor please, that is too indefinite. I think we are entitled to have the time and the

(Testimony of James W. Martin)

persons present fixed in connection with any particular [993] discussion. A question in this form is too indefinite.

The Court: I think so.

Mr. Miketta: I will rephrase it, your Honor.

Q. At the time of the discussion to which you have just referred with Mr. McLaren was anyone else present?

A. Yes.

Q. Who?

A. Mr. Hood, Mr. Fitzpatrick, Mr. Sherwood.

Q. Who is Mr. Sherwood?

A. Mr. Sherwood was an engineer that was employed at that time by the Dry Ice Corporation.

Q. And where did these discussions take place or this particular discussion with Mr. McLaren take place?

A. It was in the room adjacent to, or, rather, in the room in which these snow presses were, the snow tanks and the press were located at the General Carbonic's plant at Sixth Street and East River.

Q. During your stay at the General Carbonic Company's plant in 1926 did you discuss with Mr. Hood or with Mr. McLaren any other changes or methods of manufacturing solidified carbon dioxide in block form?

A. We discussed both with Mr. McLaren and Mr. Hood the possibilities of doing our pressing and tamping and snow formation all in one housing so as not to waste this gas that we were wasting.

Mr. L. S. Lyon: I move to strike the answer as indefinite [994] and not a proper answer to the question, because it does not reveal who made these suggestions. And I call your Honor's attention, as will appear later,

(Testimony of James W. Martin)

that we may get into some difficulty if this is not straightened out here, that Cole and McLaren had already made their invention in 1926, as has been held by the Patent Office, and prior to September, 1926 in the interference proceedings which will be referred to in this case. And I can't tell whether this witness is attempting to testify that he made these suggestions or Mr. Hood or somebody else.

The Court: Read the question and the answer, please, Mr. Reporter.

(Question and answer read by the reporter.)

Q. By Mr. Miketta: Who advanced that suggestion?

Mr. L. S. Lyon: Wait just a minute. I would like a ruling on that.

Q. By the Court: When did you have any such conversation with Mr. McLaren, more specifically?

A. It would be in the month of September or October, because it was very soon after he first saw this evolution of gas as it came off at this time.

Q. And who were present?

A. Mr. Hood I remember definitely, the others probably. Mr. Hood and Mr. McLaren were present.

Q. Who made any suggestion about incorporating these three processes in one casing? [995]

A. Mr. McLaren complained about the loss of gas. I made the suggestion that we had been doing it as indicated in this press here, in which we did not waste this gas, and that that was what eventually we would be doing again.

Q. You made that statement yourself?

A. I made that statement to Mr. McLaren and to Mr. Hood.

(Testimony of James W. Martin)

Mr. Miketta: I would like to have the clerk mark the certified copy of the file wrapper, contents and drawings, and an application filed by James W. Martin, Jr., on December 6, 1926, under Serial No. 152,754 "For improvement in carbon dioxide ice apparatus process and product" for identification.

The Court: It may be so marked Defendants' next in order.

The Clerk: Exhibit Q.

Mr. Miketta: Incidentally, I think this matter is covered by a stipulation, your Honor, and I think it can be marked as an exhibit in evidence.

Mr. L. S. Lyon: I don't know what stipulation that it can be marked as an exhibit. There is no materiality shown. In connection with the examination of this witness I don't know what this has to do, but if there is any stipulation—

Mr. Miketta: I guess not, your Honor. The stipulation does not.

Q. Do you recall, Mr. Martin, whether you filed an application for patent sometime in December, 1926?

A. Yes.

Q. I show you—may I approach the witness, your Honor?— [996] a Defendants' Exhibit Q for identification and call your attention specifically to page 2 of this photostatic copy, and ask you if you recognize that signature?

A. Yes; that is my signature. At that time I was Junior.

Q. I also call your attention to page 23 of this exhibit.

A. That was my signature.

(Testimony of James W. Martin)

Q. I call your attention also to the drawings forming a part of this certified copy of the application and ask you to state whether you recognize that?

A. Yes; I recognize it.

Q. Will you briefly state what is shown in these drawings?

A. In Fig. 1 there is shown a snow tank, cylindrical, and in a horizontal position, inclined position, nearly horizontal, with an inner and outer shell, means for bringing liquid carbon dioxide into the inner shell.

Q. Where is that indicated?

A. It is indicated at No. 3 in the Figure. A small outlet to the inner shell. The screen is marked 7 in the Figure. An outer shall marked 13 in the Figure.

Q. Is there a gas outlet shown?

A. A gas outlet is shown at 9. Inside of this chamber is a series of breaker arms which were designed for two purposes: Both to break the snow that tended to cling to the sides of the snow chamber and also to discharge the static charge of electricity that was in the snow. The jet or the [997] nozzle, liquid carbon dioxide nozzle was so placed so that the snow formed would be blown toward the far end of the chamber, the breaker arm would be kept stationary except at infrequent intervals.

Q. Where did the snow go?

A. At the far end of the snow tank there is a space in the lower portion of the cylinder for the exit of the snow into another chamber marked 20 which connected directly to the path of the piston in the press.

Q. And you are now referring to Figs. 2 and 3 of this application?

A. I am referring to Figs. 2 and 3 of the application.

(Testimony of James W. Martin)

Q. Where do you see the piston, or by what number is the piston indicated?

A. The piston is indicated by No. 22.

Q. In Fig. 3? A. In Fig. 3.

Q. And at what point would the compressed block be ejected?

A. As described in the press that was first used at Maspeth plant, in order to operate this press you must first have a closure over the end of the press chamber. After you have formed a block of ice, then that ice would, by friction, become the end of the press against which the subsequent snow is to be pressed. That was made to stick, or, rather, to increase that friction, why, there was a little pin shown at [998] 27 to drive in to keep that ice from slipping and going out. Then after that, each press movement was to press another block, as shown in X and X¹, so that the ice in the exit throat of the press had time to—we said in those days “to season,” but to permit the gas, occluded gas to come out of the ice. It was open to the atmosphere so that it could boil out from the block of ice.

Q. In other words, the outer surface of the exterior block was open to the atmosphere?

A. Open to the atmosphere.

Q. So that gas could escape from the block, is that correct? A. That is right; that is right.

Q. Did you see these drawings which you have just described at the time that you executed this application?

A. Yes.

Q. And you were familiar with the contents of the application at the time you signed it? A. Yes.

Mr. Miketta: I ask that this be introduced into evidence, your Honor.

(Testimony of James W. Martin)

Mr. L. S. Lyon: I object to that on the ground there is no materiality shown for this entire file. Perhaps the oath and the drawings and signatures that the witness has identified. But here is a great, elaborate document here which is not admissible under any theory that has been advanced; [999] and it is a file wrapper that apparently, as your Honor can ascertain, a file wrapper without a patent office action on Mr. Martin's application.

The Court: I do not see its admissibility other than it has been referred to by the witness.

Mr. Foster: I think it is admissible, if the court please. on this ground: Of course, the application as filed and the amendments that were made thereto are evidence of the knowledge of this witness. This witness has been pleaded as having prior knowledge, and certainly the documents which he signed there, the application and so on, are evidence that he had the knowledge as on that date. Furthermore, this file, which is certified by the United States Patent Office as a photostatic copy of the documents on file there, is material, all of it, upon this issue: There is an affirmative pleading that the subject matter of the patent in suit was invented, if it involved any invention, not by Cole and McLaren, but by Mr. Martin and that the plaintiffs or their predecessors in interest suppressed that invention; and in order to determine that the application was abandoned, with a very considerable number of claims allowed by the Patent Office, and in that manner suppressed so that it required, even for the defendants involved in this litigation, to make a considerable showing to the Patent Office to get this copy, it is necessary for the court to have the entire file or the court could not determine its abandonment, and hence we [1000] urge this suppression, unless the court had the complete file, and the plaintiffs would urge that it was

(Testimony of James W. Martin)

not admissible upon that affirmative defense of suppression if the file were not complete.

Mr. L. S. Lyon: I think, your Honor, there ought to be some evidence of suppression before it is allowed to be received on that theory.

The Court: Of course, it is a matter of order of proof. I think, in order to simplify it, we had better let it in, with permission granted to move to strike in the event it is not properly connected up to make it material. At the present time, of course, it is not material and would not be admissible as an exhibit in evidence. It is rather hard to separate one part from another for the purpose of this motion, so we will just take care of it that way temporarily.

Mr. Foster: I believe the court will find also that this file contains evidence of the title being in the predecessors of the plaintiff, so that it is self-sufficient for that purpose. However, there is other evidence along the same line.

Mr. L. S. Lyon: As I understand it, the court is not admitting this document except tentatively now?

The Court: No.

Mr. L. S. Lyon: And it is not necessary for us to make additional objections to it at this time.

The Court: No. You may have a motion to strike—
[1001]

Mr. L. S. Lyon: If they can make a claim of title by such a document as this, I want to be heard on it.

The Court: Well, you will in time, undoubtedly.
[1002]

Q. Mr. Martin, you have made this carbon dioxide snow in one vessel or snow tank, and have compressed that snow in a separate press, have you not? A. Yes.

(Testimony of James W. Martin)

Q. And you have also made and compressed carbon dioxide snow in the same chamber, have you not?

A. Yes, that's true.

Q. Is a different effect obtained by solidifying carbon dioxide by expanding liquid CO₂ in a chamber that does not contain a pressing plunger, than the effect obtained by solidifying carbon dioxide by expanding the liquid in a chamber that does contain a pressing plunger, other conditions as to temperature and pressure being equal?

A. Yes.

Mr. L. S. Lyon: I think the question is too general, and should be confined to the particular apparatus that was in the experience of this witness.

The Court: I am rather inclined to think that is a matter of cross examination. I think with the addenda "other conditions being equal" the question is proper. The question is: Does the presence of the press, as a part of the apparatus, opened to the snow chamber, in any way affect the product, within your experience, all other conditions being equal?

Mr. Miketta: I adopt that question.

A. There is no difference. [1003]

Q. Is a different result obtained by compressing carbon dioxide in the same chamber, in which it was formed, than that obtained by forming the solidified carbon dioxide in one chamber and compressing it into another?

Mr. L. S. Lyon: Same objection.

The Court: Same ruling. I think if there is a distinction, you may bring it out on cross examination. I don't see much difference between this question and the other one, but you may answer it.

A. There is no difference.

(An adjournment was taken until 2:00 o'clock p. m. of this same day.) [1004]

AFTERNOON SESSION
2:00 O'CLOCK.

The Court: You may proceed.

JAMES W. MARTIN,

recalled.

Direct Examination

resumed.

Q. By Mr. Miketta: Mr. Martin, were you aware of the fact that your application, serial No. 152,754, which was filed December 6, 1926, Defendants' Exhibit Q, was involved in an interference or interferences?

A. I was.

Q. Were you asked to testify during the interference proceedings regarding your dates of invention?

Mr. L. S. Lyon: I object to that on the ground it is incompetent, irrelevant, and immaterial.

The Court: Let me hear that question again, please.
(Question read by the reporter.)

The Court: Objection sustained.

Q. By Mr. Miketta: Did you at any time, Mr. Martin, refuse to testify in connection with any of the matters relating to the combined pressing and snowing machines to which you have referred this morning?

Mr. L. S. Lyon: The same objection, an improper method of proof.

The Court: Objection sustained. [1005]

* * * * *

The Court: Answer me this question: What is the date of the original application, indicated by the file wrapper?

(Testimony of James W. Martin)

Mr. Foster: The Martin application was December 6, 1926, as compared with the Cole and McLaren application of May 22, 1928.

The Court: What date did Martin assign his interest in that patent application? [1014]

Mr. Foster: My understanding is he assigned his interest in the patent application when he signed the application, before it was filed.

Mr. Miketta: By an instrument dated December 11, 1926, your Honor.

The Court: What difference does it make as to what Martin did? He did not have any interest in the patent. He did not have to testify. [1015]

* * * * *

Mr. Miketta: * * *

Q. Mr. Martin, have you ever testified regarding this same machine which you built in 1925, at any other time?

A. No.

Q. Have you ever been asked to do so by anyone who owned title to your application for patents?

A. No.

Q. I show you a copy of your patent No. 1,659,435, and ask you to compare the drawing of that patent with the drawing forming the apparatus of Exhibit Q.

A. The general outlines of Figure 1 in Exhibit Q, when taken with the general outlines of Figure 2 of the same exhibit, are similar to the general outlines in this patent 1,659,435?

Q. And are you the J. W. Martin whose name appears on Patent 1,659,435? A. I am.

Q. Did this Patent 1,659,435 have any reference to a combined snowing and pressing operation?

A. It did.

(Testimony of James W. Martin)

Q. Will you please call attention to that part of the patent which so states? I call your attention to page 4. [1017]

A. All right. That would save time.

Q. Will you read the pertinent part of that patent? This patent is mentioned in the list of patents, and is part of the booklet.

The Court: I have got it.

Mr. Miketta: It is No. 1,659,435.

A. I start reading on page 4, at line 44:

"The snow chamber is shown as inclined for the purpose of facilitating clearing out of snow at the far end of the chamber, in a bin 24, to which access may be had through the door, 25. [1018]

"The snow chamber may be and preferably is, provided with agitating scrapers for clearing the snow that collects on the inner surface of shell 10, as described in a companion application of even date herewith, and the exit, 25, may be the path of movement of a compressor as shown in said companion application."

Q. I call your attention to patent No. 1,887,692, and ask whether you are the James W. Martin named as inventor in that patent?

A. I am the James W. Martin.

Q. Will you please compare the drawings appearing in patent 1,887,692 with the drawings, Figs. 2 and 3, of Exhibit Q.

A. They are apparently duplicates—they are duplicates; the drawings are duplicates.

Mr. Morris: May I have that answer read? "The drawings are" what?

(Answer read by the reporter.)

(Testimony of James W. Martin)

Q. By Mr. Miketta: Mr. Martin, do you have any recollection as to approximately how many tons of solidified carbon dioxide in block form you actually manufactured and sold at Maspeth prior to July, 1925?

A. To the best of my recollection, it was in the neighborhood of 20 tons.

Q. And what proportion of that was actually made on the combined snow and block-forming machines which you have [1019] referred to and which you illustrated on Exhibits—

The Witness: May I have the previous—

Q. —O and P?

The Witness: To make sure that I have understood your question, may I have the previous question read to me, the question that I answered? May I have that read back to me?

The Court: Yes.

Mr. Miketta: Yes.

The Witness: I may have made a mistake.

(Previous question read by the reporter.)

A. My answer should have been between 20 and 30 tons, made prior to July.

Q. By Mr. Miketta: Now I ask what proportion of that, or approximately how many tons of solidified carbon dioxide in block form was made by you on machines such as those shown on Exhibits O, P, and L?

Mr. L. S. Lyon: I don't think the witness has testified to any plurality of machines during that time.

Mr. Miketta: Well, your Honor, those machines changed in form, as I understand, from L to O, or to P and then to O, eventually, and with the understanding that all those forms were employed in manufacturing blocks, I am simply trying to find out what was the total

(Testimony of James W. Martin)

number of pounds or tons of solid CO₂ that were made on these machines.

The Court: With that understanding, you may answer the question. [1020]

A. Between two-thirds and three-fourths of the total amount that was made prior to July 3rd was made on this type of machine as indicated in these exhibits. May I change that last answer to clarify it, your Honor?

The Court: Yes.

A. It was made on the machines of the type as indicated in these drawings.

Q. By Mr. Miketta: Now, just to summarize your testimony and get our dates straight, as I understand it, it is your recollection—

Mr. L. S. Lyon: Now, if your Honor please—

Q. By Mr. Miketta: —that the machine of Exhibit L was built and operated when?

A. Will you enlighten me as to which is L? I am sorry not to remember.

Q. This is L (indicating exhibit).

The Witness: May I have that question, please?

(Question read by the reporter.)

A. The machine as indicated by Exhibit L was operated from approximately the end of March to some day in the following April, that is, April of 1925.

Q. By the Court: March of '24 to April of '25?

A. No; March of '25 to April of '25.

The Court: Oh, I see; the same year.

A. The same year. It was just a brief—it was a few weeks. [1021]

(Testimony of James W. Martin)

Q. By Mr. Miketta: And what is your independent recollection as to when a machine of the type shown on Exhibit O was actually operated?

A. By Exhibit O you refer to these diagrams of the press without a snow tank?

Q. One of them is marked Exhibit O, Mr. Martin.

A. I am sorry. I am not familiar with it.

Q. This is the exhibit.

A. Oh, I beg your pardon. I see it now. That was a brief period, I believe, in the month of April that this modification of the machine was employed in making ice.

Q. April of 1925? A. April of 1925.

Q. And now referring to machines embodying the modifications shown on Exhibit P, when was that machine actually built and operated?

A. The diagram as indicated as No. 2 was also a brief, transitory period, probably not exceeding a month. When this screen kept bursting we abandoned that modification and went directly to the modification as shown in diagram 3 which had the reinforced pyramidal screen. At that time the liquid CO₂ was injected into the machine down in the press chamber.

Q. And when was that last modification actually put in operation? A. It was in May of 1925. [1022]

Q. So that, independent of the time when you moved out of Maspeth, all these forms of machines had been built and operated during the months of March, April, and May of 1925, is that correct?

A. They had been operated during those months.

Q. And is it your recollection that definitely all of these things took place before July 4th, 1925?

A. I have very definite remembrance of those events.

(Testimony of James W. Martin)

Q. Mr. Martin, do you know what pressures you actually obtained in the machine of Exhibit P, Fig. 3?

A. I have no way of determining the exact pressures, as we did not put a gauge on the machine. I have evidence of the pressure which I think most engineers would back me up in, that, first, the necessity of making a pyramidal screen in order to hold the pressure; second, the fact that the ice produced was clear, translucent ice.

Q. What does not indicate to you?

A. Well, it indicates that it was made from triple point snow; a snow had been formed at around the triple point.

Q. Did you have any difficulty in driving the plunger of that press?

A. Yes. We could not drive it against the pressures of that magnitude and we put in a vent over on the drive side of the machine between the drive and the snow, where that snow tank had been setting, to relieve the pressure. It was just a valve which relieved to atmosphere, permitting us to press [1023] the snow. We could not have pressed the snow; we did not have power enough to press the snow while it contained the liquid.

The Court: Now, let me see if I understand you.

Q. Taking these various modifications of the original apparatus, individually and collectively, the modifications that you made did not affect the pressure that you carried in the snow chamber, did it, up to the time you put a vent in, I mean, as depicted on these drawings?

A. Yes, sir. Before we put this pyramidal screen right above the press chamber there was opportunity for the press to relieve itself through into the line going back, the exit line going back to the compressor.

(Testimony of James W. Martin)

Q. I see. Then, when you put the screen in you plugged it up to such an extent that it could not get through there? A. Yes, sir.

Q. Then you put on the pyramidal screen to relieve that situation? A. Yes, sir.

Q. And then you found that the pressure in the chamber of the press was so great that you did not have power enough to operate your press and you had to relieve that by a vent?

A. Yes, sir. When you were injecting liquid at above 60 pounds pressure, the liquid was up against the screen so that it evaporated right in the screen and plugged the screen up. Then we found we had to release it to atmosphere in [1024] order to work the platen of the press, the piston.

Q. By Mr. Miketta: Well, have you indicated a valve on this Exhibit P, Fig. 3? A. I have not.

Q. For a vent?

A. No; I have not indicated that.

Q. Where was it located, Mr. Martin?

A. It was located at this point, which is to the power end, the drive end of the press, adjacent to the carbon dioxide outlet.

The Court: Indicate that with a red pencil.

A. (Marking on exhibit) This cross indicates a valve set in the line at the position indicated.

Q. What I was getting at was this: Until you put in that vent there was nothing that you did intentionally to control the pressure in that machine, and the way you told what the pressure was came from experience. When it came out with heavy force, you knew you had high pressure? A. Yes, sir.

(Testimony of James W. Martin)

Q. When you could not operate your press, you knew you had high pressure. When the product came out in translucent form, you knew that it must have gotten to the triple point or above? A. Yes, sir.

Q. You did not have any gauge?

A. It was crude, preliminary operations. [1025]

Q. By Mr. Miketta: Mr. Martin, as these blocks were extruded from the press was there any gas escaping through that opening also?

A. Yes; gas escaped through the delivery end of the press around the blocks.

Q. And that was true in all of these modifications wherein you were using an extrusion type of operation?

A. Yes; it seemed to be the gas that was occluded in the ice itself partially, and partially gas that squeezed between the block and the press itself, press walls.

Q. It is my understanding, Mr. Martin, that you continued the use of these snow tanks throughout your stay at the plant of the General Carbonic Company, is that correct?

A. We used—yes; we continued the use of snow tanks in the General Carbonic plant at Sixth Street and East River.

Q. And you moved away from that plant and went to Yonkers, is that correct? A. Yes; that is correct.

Q. What was the time of that move, approximately?

A. It was in the fall of 1927, the early fall I would say.

Q. Did you ever have anything to do with the Elizabeth, New Jersey, plant of the Dry Ice Corporation?

A. Yes. That was built under my supervision, designed in May, 1927, and built in 1928, to the best of my memory.

(Testimony of James W. Martin)

Q. Was any continuous or combined snow-forming and block-pressing machine built for use in the Elizabeth plant? [1026] A. Yes. [1027]

* * * * * * * *

Q. By Mr. Micketta: Did you design a machine for use in the Elizabeth plant? A. I did.

Q. Was such a machine built?

A. Such a machine was built and installation was under way when I left the company.

Q. You did not see the machine after it was completed?

A. I did not see the completed machine. I mean I did not see the completed machine installed. Let me correct my answer.

Q. You saw the completed machine before it was installed, is that correct?

A. To the best of my memory, I have a vision in my mind of that machine; so that I feel confident that I saw the machine; but I did not see it installed because that occurred just after I had left the company.

Q. Was the machine which you designed similar to the general configurations of the machine illustrated in patent 1,659,435?

A. In general, yes. That is not a—this is very diagrammatic, but in general, yes.

Q. Was the reason that you did not install a combined snow-forming and block-pressing machine between, say, the late summer of 1925 and 1928, to which you have just referred, that the combined machines which both

(Testimony of James W. Martin)

produced snow and pressed [1028] were not capable of operating commercially?

A. No. They operated commercially. We sold the ice.

Q. What was the reason for not building one until 1928? A. Lack of development funds.

Q. Was the Dry Ice Corporation reorganized about that time?

A. Yes; it was reorganized and more money was put into it.

Q. Do you have a financial interest in any of these defendants, Mr. Martin? A. I have not.

Q. You have referred to the fact that these early 1925 machines were built by Eppenbach, is that correct?

A. That is correct.

* * * * *

Mr. Miketta: I would like to have the clerk mark for identification photostatic copies of pages 240 to 245, pages 412 to 427, and page 433 of certain records bearing at the top "Prest Air Corporation", said photostats having attached thereto a certificate of Edwin S. Eppenbach and a sketch or diagram. [1029]

The Court: It may be so marked for identification.

[Note: Defendants' Exhibit R will be found in the Book of Exhibits at page 1377a.]

* * * * *

Q. By Mr. Miketta: Mr. Martin, did you ask to see any of the books or records kept by Eppenbach in your last visit to him? A. I did; yes, sir.

(Testimony of James W. Martin)

Q. Did you see such records?

* * * * * * * *

A. I saw the account book of Eppenbach.

Q. By Mr. Miketta: What did it look like?

A. Well, it was a brown book, looked like most any other ledger, account book.

Q. How thick?

A. It would go an inch and a half thick, 16 inches long, and around 8 inches wide.

* * * * * * * *

Q. By Mr. Miketta: Did you take any photostatic copy of those records?

A. I did. I took them down to— [1030]

* * * * * * * *

A. I took the book that Mr. Eppenbach had found in his pile of old records to a photostat company, 120 Broadway, New York City, and had the pertinent pages photostated, and I returned the book of Mr. Eppenbach.

* * * * * * * *

Q. By Mr. Miketta: I show you Defendants' Exhibit R for identification and ask you whether these pages constitute those which you photostated from Mr. Eppenbach's records?

Mr. L. S. Lyon: The same objection.

The Court: Oh, you may answer yes or no.

A. Yes; they are.

Q. By Mr. Miketta: I call your attention to the top sheet on these records. Do you recognize the signature appearing thereon? A. I do.

Q. Did you see Mr. Eppenbach sign that?

A. I did.

(Testimony of James W. Martin)

Mr. Miketta: I would like to have these introduced in evidence, your Honor. [1031]

Mr. L. S. Lyon: I would like to examine the witness on voir dire before making an objection, your Honor.

The Court: Yes, sir.

Q. By Mr. L. S. Lyon: Have you read these records, Mr. Martin? A. Yes, sir.

Q. Do you have personal knowledge of each of the transactions appearing thereon?

A. Those pertaining to the—

Q. Just answer the question.

A. All right. Excuse me.

Q. Well, excuse me. Go ahead.

A. Those pertaining to the snow press and to some of the refrigerating equipment. To all of those pertaining to the snow press and to many of those pertaining to the refrigerating equipment.

Q. I call your attention to the item on page 425 under date of May 26, reading: "Repairing door on refrigerator box at General Carbonic plant for Dry Ice Corporation of America, total amount \$8." Do you know what that transaction was?

A. I think that there was a mistake made by the secretary or the bookkeeper when he put "General" instead of "Liquid".

Q. You think so, but do you know what this transaction was?

A. Do you want me to pick out which box it was repaired? [1032] It was probably one of these

(Testimony of James W. Martin)

Q. Do you have any recollection of that transaction, that particular transaction?

A. Picked out of its context, no. I would in general if they were fixed in a door on one of those previous boxes.

Q. This is a record of May 26, 1925 showing a payment by the Dry Ice Corporation of America to the Eppenbach concern for repairing a door at the refrigerator box at the General Carbonic plant. According to your recollection was there such a device at the General Carbonic's plant on May 26, 1925 which was or just had been repaired for the account of the Dry Ice Corporation of America?

* * * * *

A. My answer is no. [1033]

* * * * *

Q. Where are the records from which these photostats were taken, Mr. Martin?

A. The last I saw of those records I handed back to Mr. Eppenbach at his place of business in Long Island City, New York. [1035]

* * * * *

Q. By Mr. Foster: Did you, Mr. Martin, at the time that you saw the books, and had them photostated, as repre- [1039] sented by Defendants' Exhibit R for identification, request permission to bring the books to this trial?

A. I did.

Mr. L. S. Lyon: Same objection, and I move to strike the answer.

The Court: I think it is a little out of order. I would have let it go in a little earlier, so I guess I will leave it as it is. At this time I don't think it makes

(Testimony of James W. Martin)

much difference under the present ruling, except as an excuse for failure to bring in the originals.

Mr. Foster: One other question, Mr. Martin: Was that permission granted? A. It was not.

* * * * *

Cross-Examination

Q. Were you continuously employed by the Dry Ice Corporation at the plant of the General Carbonic Company, to which you have referred, from the time you moved from the Maspeth plant to the time you moved to the Yonkers plant?

A. I personally was not continuously so employed, no.

Q. Give us the dates that you were so employed between [1040] those two occasions?

A. May I ask for a clarification?

Q. Yes.

A. When you say was I employed, you don't question the fact that I was employed by the Dry Ice Corporation? There was no hiatus in my employment with the Dry Ice Corporation. That is not what you are asking?

Q. Let us start out a little further back. You entered the employ of the Dry Ice Corporation when?

A. January 16, 1925.

Q. When did you leave their employ?

A. November 30, 1928.

Q. Were you in the employ of the Dry Ice Corporation continuously between those two dates?

A. I was.

(Testimony of James W. Martin)

Q. Your first employment was at the Maspeth plant, to which you have referred?

A. My first employment was at the offices of the Dry Ice Corporation on 42nd Street in New York. I spent considerable time at the laboratories of the Prest Air Corporation, which were in Long Island City. When the press was completed, I spent most of my time, not all of it, but most of my time, at the plant at Maspeth, Long Island.

Q. When was that move made to the General Carbonic plant?

A. To the best of my memory, it was about September [1041] of 1926.

Q. How do you fix that date? Have you any means of fixing it definitely? A. No.

Q. Are you sure you are not wrong by a year?

A. I have heard the testimony given in open court here, and I have racked my brains to try to reconcile the dates I have given, and I am sorry, in all honesty I can't reconcile it.

Q. I am asking you this: Are you sure that you are correct, and there is no possibility of your being wrong within one year?

A. There is a possibility, yes, because I am remembering back 18 years.

Q. From the time the plant was moved to the General Carbonic plant until it was moved out to Yonkers, were all of the activities of the Dry Ice Company carried on in the General Carbonic plant?

A. All I knew anything about, and I should have known.

(Testimony of James W. Martin)

Q. During this period there was nothing being done at Maspeth?

A. If it was done, it was done without my knowledge.

Q. How much time did you spend at the General Carbonic plant during that period?

A. Probably one-fourth of my total time. If you wish me to, I would say that I was over there four days [1042] out of seven.

Q. For about how long each day?

A. Anywhere from an hour to all day and part of the night.

Q. You were familiar with whatever equipment was being employed in that plant at that period, for the manufacture of dry ice, were you not? A. Yes.

Q. I show you a photograph, and ask you if you can identify anything which appears on that photograph.

Mr. Foster: May we see the photograph?

The Court: You may all come up here and look at it. We will all see it at the same time.

A. I would say that, from the background, that this is a corner facing on Sixth Street, at the General Carbonic plant at Long Island.

Q. By Mr. L. S. Lyon: Is that a corner of the room in which your company manufactured dry ice?

A. As nearly as I can say, from the picture, I think it is the exact spot.

Q. Did you ever see the piece of equipment which appears in the foreground of this picture?

A. Yes, I did.

Q. When?

A. I came back, after we had gone to Yonkers. This door was open along here, and I peeked through the door, sir. [1043]

(Testimony of James W. Martin)

Q. That was the first time you saw it?

A. Yes, sir.

Q. It is your testimony, is it, that this machine as it appears in this photograph, was not in that location until after what date, to your knowledge?

A. The best I can remember, we did not leave, the Dry Ice Corporation did not leave Sixth Street and East River until the fall of '27.

Q. Have you any means of fixing that date with any certainty?

A. We moved the plant up to Yonkers. Conditions up there we found very unsatisfactory. We immediately started to getting the design ready for a plant of our own at Elizabeth. The plant was designed the last part of 1927 and the first part of 1928, and it was built in 1928, and completed about, I imagine, near the summer of 1928.

Q. Is there any possibility that you are wrong in your recollection, and that you actually moved out of the General Carbonic plant on September 27, 1926?

A. September 27, 1926? I am trying to remember back that long, and I could be mistaken, yes.

Q. If you did not move out of the General Carbonic plant until some time in September, or October, of 1927, this picture that you have in front of you could not have been taken early in 1927, could it?

A. If we were still there, this space, as nearly as [1044] I could tell it, was occupied by our snow tanks.

Q. Is it your positive testimony that this machine, as it appears in this photograph, was not just where it

(Testimony of James W. Martin)

appears in the photograph early in 1927, in the General Carbonic plant?

A. You will have to refer to my previous answer. I have tried to fix these dates to the best of my ability, but there is a chance that I was wrong.

Mr. L. S. Lyon: I would like to offer this photograph for identification, on the cross examination of the witness.

The Court: It may be received.

The Clerk: Plaintiffs' Exhibit 20.

[Note: Plaintiff's Exhibit No. 20 will be found in the Book of Exhibits at page 1351.]

The Court: It may be received in evidence for the purpose of explaining the testimony of this witness, and will save marking it for identification.

Q. By Mr. L. S. Lyon: You have given us the figures for the production of dry ice at the Maspeth plant in the month of June, on up to the month of July, 1925. Can you give us the figure for July, 1925?

A. No, the figure I gave was an approximate division of the total tonnage for that year, remembering how many customers we had, how many snow tanks we had. And I have tried to reconstruct in my mind how much ice was made, and then I gave that rough figure.

Q. What period of time was covered by that production [1045] that was included in that figure?

A. I believe the question was how much production was made prior to July 3, 1925, at the Maspeth plant. It was my best recollection that it was somewhere between 20 and 30 tons were produced before July 3, 1925.

(Testimony of James W. Martin)

Q. I think perhaps you are mistaken. I meant July 3rd?
A. July 3rd, yes.

Q. You have a definite recollection within that limit of 20 to 30 tons, that 19 years ago, before that particular date, that was the amount of ice produced, is that correct?

A. That is the reason I explained as I did, sir. Of the 135 tons made in that year, which was a fairly definite figure; it is trying to reconstitute how we worked. It is my best judgment that we produced between 20 and 30 tons prior to July 3, 1925.

Q. According to your recollection, by July 1, 1925, the machine to which you have referred had reached the form shown in diagram 3 of Exhibit P; is that correct?

A. Yes.

Q. Was that machine ever changed after then?

A. In order to answer that question intelligently I will have to answer it in this way: There were three of these machines; two of them remained in the form as shown in Exhibit O, diagram 1. This other plant, in which we have taken off the hopper, was either kept in the condition [1046] as indicated in the diagram 3, or was dismantled. There was some corrosion, and it is possible it was dismantled.

The Court: The other two?

A. The other two remained substantially as diagrammatically indicated in Exhibit O.

Q. By Mr. L. S. Lyon: Was more than one of these machines, as shown in Exhibit O, or with the modification you have just explained, actually operated to make dry ice?

A. I can remember only one being operated.

(Testimony of James W. Martin)

Q. According to your recollection, what was the date of the last manufacture of dry ice in that machine?

A. It was probably the end of June. That is about the best I can say, because when the rush commenced around July 4th, we had to produce ice faster than the machine could be producing it. We used our gas and our man power in producing ice in the snow tanks.

Q. You want to be understood as testifying that the Dry Ice Corporation from that period on, until you left its employment, did not have enough money to build a larger machine of that type: is that correct?

A. We couldn't get money appropriated for that purpose.

Q. You never actually attempted to build a machine of that type to produce a product of a 10 by 10 cross section, did you?

A. You are speaking now of the type indicated in this [1047] diagram?

Q. Yes.

A. No, the type was, as I explained, from a different type of machine.

Q. You say that you designed this Elizabeth plant before you left the company, and the construction and installation was under way. In round figures, how much did the Dry Ice Corporation expend on that plant?

A. Before they got through it was over \$300,000.

Q. Nearer \$600,000, wasn't it?

A. I remember the figure \$300,000, because we were surprised at it going that high. You include land and all, do you, in the plant?

Q. Whatever you expended, in putting in that plant.

A. You may be right.

(Testimony of James W. Martin)

Q. You say that you moved all your equipment over to the General Carbonic plant from Maspeth; is that right?

A. All the dry ice equipment. I can't remember exactly what I testified. I tried to leave the impression, and it is a true impression, that we removed the snow tanks from the Maspeth plant, and took them over to Sixth Street and East River. I remember we had several snow tanks we had discarded. Whether we left our discarded snow tanks over there, as of no particular value, I don't know. There were some snow tanks left at Maspeth, but for all operating purposes we took all the equipment over to [1048] Sixth Street and East River.

Q. How definite is your recollection that you actually moved any snow tank equipment from Maspeth to the General Carbonic plant? Have you got a clear recollection of that?

A. You want me to remember the actual transition of these snow tanks on their way over, or do you want me to remember the finished results?

Q. I want to know, have you got a clear recollection of the fact that you moved snow tanks from Maspeth to the General Carbonic, when this transfer was made of the dry ice activities from Maspeth to the General Carbonic.

A. To the best of my memory we did, yes.

Q. Have you got a clear recollection that you did, or might you be mistaken about that?

A. Sir, when you ask me whether I might be mistaken about these things, I think my best answer is, to my best knowledge and belief that was the fact.

(Testimony of James W. Martin)

Q. Maybe I can refresh your recollection. Can you remember anything about what happened when you first attempted to start your operations at the General Carbonic plant, after moving over from Maspeth, the first few days? Can you remember what transpired?

A. Do you mean until we got our tanks set up, we made snow just any way we could to fill our orders?

Q. Do you remember those first few days, what you [1049] actually did? A. I can remember troubles.

Q. Can you remember in what apparatus you made the first snow, or the first dry ice that you produced at the General Carbonic plant, on moving over there?

A. I have a recollection of making, while the tanks were being brought over from Maspeth—they were at Maspeth, and while they were being brought over to Long Island City, I have a very hazy recollection of making snow in bags.

Q. Are you sure you were waiting for the tanks to be brought over from Maspeth, or for some new snow tanks to be constructed by the General Carbonic Company?

A. We got some new tanks, but as I remember, we were waiting for the tanks to come from Maspeth. [1050]

* * * * *

Q. By Mr. L. S. Lyon: How many of these machines of Exhibit P type do you actually remember bringing to the General Carbonic plant? [1051]

Mr. Foster: We make the same objection, your Honor: it has been asked and answered on cross examination.

(Testimony of James W. Martin)

The Court: I am not sufficiently sure, so I will let him answer again.

A. I remember a machine of the O type setting in the yard just outside of the building in which we made snow. It was—

Q. In the scrap pile? A. In the scrap pile.

Q. Did you put it there?

A. No, I didn't put it there. It was put there under my general supervision. I was not directly in charge of the work. In those days I think I was assistant to the president, or some such high-falluting title. The man actually in charge was Hood, but I can remember seeing a press of this general description sitting out in the bone-yard.

Q. Do you remember actually seeing it moved there from Maspeth?

A. No, it could have been moved there when I was not there. It could have.

Q. How many snow tanks did you move over to the General Carbonic plant from Maspeth, do you remember?

A. I think we moved three of them.

Q. What became of the other two of these devices of the type shown in Exhibits O and P? You say there were three of them. What became of the other two, do you know? [1052]

A. One set outside of the Maspeth plant, and I think eventually it went back to the Eppenbach place.

Q. I did not ask you that. I asked you what became of the other two.

A. That I have a recollection of going over to Sixth Street and East River. I am trying to think of the other two you asked me about. One sat outside of the Mas-

(Testimony of James W. Martin)

peth plant, and one probably—I can't remember distinctly, but probably it was taken up to Eppenbach's place. We tried to get some refunds on it.

Q. What became of the third one?

A. I am sorry, I can't remember the third one. As I remember, it was this Exhibit P type. I can't remember where that one went to after we finished with it.

Q. Do you have a recollection of Mr. McLaren ever seeing this one of these machines that you say was out on the scrap pile, at the General Carbonic?

A. No, I have no recollection of his having seen it.

Q. Have you any recollection of Mr. Cole ever seeing it?

A. I have no recollection of his seeing it.

Q. Or any of the other engineers at General Carbonic Company ever seeing it, while you were there? Did you ever see any of them looking at it?

A. No, I didn't see any of them looking at it.

Q. How big a scrap pile was this?

A. I would say it covered an area of 40 feet long, about [1053] a foot high, and was about 8 feet wide.

Q. Was this machine set upright in the scrap pile, or was it lying over on its side, or what was it doing there?

A. My memory is of seeing that sitting upright, and it was on the side of the pile toward the street.

Q. You say that you had a discussion, at which Mr. McLaren was present, in which Mr. McLaren complained of the gas that your company was wasting, and that you made the suggestion that an apparatus could be built in which the solidification and tamping and pressing could all be performed in one apparatus, is that correct?

A. That is correct.

(Testimony of James W. Martin)

Q. What was the date, as nearly as you can remember, that you had that conversation?

A. It was within two months of the date we moved in and started operating at Sixth Street and East River.

Q. If you moved in in September, 1926, that date would be sometime in—

A. In October, probably.

Q. October or November, 1926? A. Yes.

Q. If you moved in in September, 1925 when was that date?

A. If we moved in in September of 1925 then it would be either the month of September or the month of October. What I have said is within two months elapsed time; not two specific calendar months. [1054]

Q. Was Mr. Cole present at that conversation?

A. No, I don't remember Mr. Cole being present. I don't think he was.

Q. Was there more than one of these conversations at which you made any such suggestion, or just this one to which you have referred?

A. I remember, because we were a little anxious about getting thrown out of the plant, because we were wasting carbon dioxide.

Q. What were you doing, that you were wasting carbon dioxide?

A. We couldn't help it, in the operation of the snow tank, and the tamping and the pressing, if those are done in separate places: when you open the doors of the snow tank, all the pressure that is in the tank leaks out around the door. I think it is much more visible than it is real actual pounds; it is very visible foam of carbon dioxide which pours out and covers an area of 6 square feet,

(Testimony of James W. Martin)

and it looks like an awful lot of gas being lost. When you tamp a certain amount of the gas is lost, and finally, when you put it in the press, the gas escapes from the ice as you press it.

Q. When did you design the snow tanks which you built or operated at Maspeth, and those which were built and operated at General Carbonic?

A. The ones we used at Maspeth were designed just on diagrammatic sketches, shall we say, to meet an immediate need, [1055] and they were produced very quickly. You dignify them to say they were designed. They were sketched out on rough paper, and taken over to the machine shop, and they made them up according to our sketches.

Q. I would like to get the date of that.

A. That was done about the time we got this order from Breyer, which fixes it fairly definite in my mind, that was made in June of 1925.

Q. Contemporaneously with the work that is reflected on Exhibits O and P?

A. Contemporaneously with the latter part of that work, yes.

Q. Is that all the designing that you were doing during that period for the Dry Ice Corporation, or were you designing other things besides?

A. I was occupied to some extent with the design of use equipment, refrigerator boxes, but most of my time was in this manufacturing type, and George Kusack, who has been mentioned before, was very interested in the use; the customers' boxes, and things of that kind, so I had a partial knowledge, but not a complete knowledge of that work.

(Testimony of James W. Martin)

Q. What you have down here only reflects a portion of the different ideas that you had which you suggested at that time, and worked on, in connection with the apparatus for making dry ice? You had numerous other schemes, did you not?

A. What time are you talking about, sir? [1056]

Q. From January, 1925, to September, 1925.

Mr. Foster: That is objected to, because the question is compound and is in at least two parts, and is indefinite.

The Court: He can answer.

A. In the spring of the year we would get pushed for production, and I was putting all of my time and attention on getting the ever-increasing production out of these presses of the types shown in Exhibits O and P, and the previous exhibit.

Mr. L. S. Lyon: That is hardly an answer to the question.

A. I am having to answer your question in three parts. During that time my attention—in other words, I did not give, during that period, which would be in point of time, from January to, say, sometime in May, all of my time to this press. Then force of circumstances forced me to give my time to the designing of the snow tank. It was a hurried job. After the peak of the production was over, and I had some time, then I started to work with Mr. Dean, our patent attorney, trying to get my ideas rounded up for patents.

Q. Who was Mr. Dean?

A. Mr. George Dean was the patent attorney for the Dry Ice Corporation, during the entire time of my employment.

(Testimony of James W. Martin)

Q. He was the man who prepared, as attorney, and filed the various applications in your name, which your attention has been called to here today?

A. He was. [1057]

Q. Did you ever file an application on any of the ideas that are incorporated in this machine shown in Exhibits O and P?

A. Some of the ideas, yes; no diagram on a patent;—no drawings on a patent reflected this piece of equipment.

Q. You did file an application on your snow tank, did you not? A. Yes.

Q. Why did you file an application on your snow tank, and not on this equipment?

A. The snow tank was filed because it was the piece of equipment on which we were making our production. After this first initial operation we had put our snow tanks into several places, and we had an ambition to put them in other places, because that was out in public view, and we thought we had better get our patent application in on it. That influenced us to take that first, and almost concurrently with that, you will notice from the filing date, we were trying to get a snow press and snow tank in one chamber, under one housing.

Q. You did, during that period, file numerous patent applications on other things that were not being used at all commercially by the Dry Ice Company, did you not?

A. Use patent you have reference to? Yes, I did.

Q. Various patents? A. Yes, I did. [1058]

Q. Referring now to Exhibit L, in this device what was the speed of the rotation of the crank that reciprocated the plunger?

(Testimony of James W. Martin)

A. Let me time myself. Possibly five times a minute; five R. P. M.

Q. What determined the limit of travel of the plunger? A. The diameter of the drive wheel.

Q. So the plunger could reciprocate approximately the length of the diameter of the drive wheel, is that correct?

A. By the diameter of the plunger on the drive wheel, on which we attached the crankshaft.

Q. It has been suggested that that was a compacting action analogous to tamping, as distinguished from a pressing operation in a press. What have you got to say about that?

A. It would be, if the thing was running free, it would be analogous to tamping. It is properly incremental pressing—pressing new increments in. It didn't operate very satisfactorily in that manner. The nearest it would operate was by allowing it to withdraw to the position shown here, and not driving it against pressure. It was almost impossible to drive it in the later stages of this development.

Q. You have said you used this C clamp at the end sometimes, and other times you operated the machine as an extrusion machine? A. Yes.

Q. Did you use the C clamp just to make the first block? [1059]

A. When it was operated as an extrusion machine we used the C clamp only to start the first block, to compact it.

Q. To what extent did you use this machine other than as an extrusion machine?

A. We got the best results when using it not as an extrusion machine. The major portion of the time was

(Testimony of James W. Martin)

making the block, taking off the C clamp, taking that block out, and starting fresh, and making another block. [1060]

Q. Now, did you have any difficulties with the machine when you so operated it?

A. I will have to answer that question this way—and bear with me, will you? If you were an engineer asking me that question, I would say yes; any new machine you have trouble with it of all kinds. As you asking me as an attorney, I think I should answer that no insurmountable troubles, because we made commercial ice and we sold it.

Q. The total amount of ice that was ever made on the machine was something about 20 tons, I think you say, is that right?

A. It would not exceed 20 tons, and that was pretty close to what it made and we sold.

Q. And those were all these small blocks, 3 inches by 3 inches?

A. $3\frac{1}{2} \times 3\frac{1}{2} \times 8$ inches was the approximate size.

Q. And the 8 inches was their length as they extruded from the machine?

A. Yes; on the extrusion ones that was the length. We cut them up into 8-inch blocks as they came from the press.

Q. And the cross-section of the chamber was $3\frac{1}{2}$ inches, was that right?

A. That is right; yes. Some of those presses—you recognize that some of those blocks must be a little bit smaller dimensions after they had gone through the retarding nozzle. [1061]

(Testimony of James W. Martin)

Q. What was the production of this machine per hour, if you ever determined it?

A. I never determined it. Oh, it would be a rough guess. I would have to reconstitute. I don't remember ever weighing it for any hour's production.

Q. As nearly as you can estimate it, what production did you actually obtain in your average results on this machine?

A. Oh, we ought to run in—we might get 60 blocks an hour.

Q. How many of those blocks would it take to make a ton?

A. I don't remember the weight of those blocks. I remember they weighed about four pounds, though.

Q. Did you ever have any spoilage?

A. Oh, yes.

Q. In operating the machine?

A. Yes; we had spoilage.

Q. About what was your spoilage rate in the operation of that machine?

A. We, fortunately, were able to sell most of our spoilage, so—

Q. Well, but what was the spoilage rate?

A. Ten percent. I think that is approximate.

Q. What is the longest continuous operation of the machine that you obtained, or the longest period of time without having to shut it down because of something going wrong? [1062]

Mr. Miketta: Objected to as assuming something not testified to by the witness, your Honor.

The Court: Oh, well, I guess that is, again, a matter of common knowledge. I think that, according to his

(Testimony of James W. Martin)

statement there, they had trouble with it. And you did occasionally have to shut it down to make adjustments or repairs, etc.?

A. Yes, sir. I would have to just guess if I answered your question.

Q. By Mr. L. S. Lyon: You had to shut it down frequently, though, didn't you?

A. Yes; it was shut down frequently for very brief periods of time.

Q. What was the cause or what occasioned those shut-downs?

A. There was, of course, the—this would not hardly be called a shut-down—we had to stop the motor power of the machine when we were snowing in, snowed in and make a block and then started up again and pressed that.

Q. You were not including that in your answer?

A. No. I am just trying to find out from you what you include.

Q. No. I mean where something went wrong with the machine and you had to shut her down and get going again.

Mr. Miketta: Objected to, your Honor, as not identifying the particular machine in question.

Mr. L. S. Lyon: We are talking about this machine from [1063] the time you started it as the form shown in Exhibit L through to the last form you had it in that you have indicated in your testimony in connection with Exhibit, I think it is P.

A. This is just guess, but somewhere in the neighborhood of two hours of straight run, then there was a short shut-down. The shut-downs we refer to are not

(Testimony of James W. Martin)

breakdowns or things of that kind; they are merely you stop to adjust something.

Q. Have you ever had any experience with any other type of extrusion machine?

A. Yes; we filled shells in the last war with an extrusion machine.

Q. In an extrusion machine, from your knowledge as an engineer, the problems magnify as you increase the cross-sectional area of the material being extruded; is that a correct statement?

A. That was true in handling amytol in the last war; that was my experience.

Q. You, as an engineer, would say you would experience the same thing in trying to make a machine as shown in these Exhibits L to P if you tried to make a block of a cross-sectional area of material 10 x 10?

A. Well, am I permitted to ask you what time, when I thought that, whether I was thinking that when I was doing this, or what I think now? [1064]

Q. What do you think now?

A. Well, since that time I had heard about the troubles that my friend back here had with his machine at Sixth Street and East River, and I know he had a lot of trouble with it; so now I would say yes; you would have trouble. In those days I thought right probable that you could make that machine larger.

Q. But you are pretty well convinced you would have an awful time with it doing it now, aren't you?

A. Now, yes.

Mr. L. S. Lyon: If it is all right with you, your Honor?

The Court: Yes.

(Testimony of James W. Martin)

Q. Your maximum was about a ton a day; that would be the very maximum, wouldn't it?

A. Yes. I think we may have made a little bit more than that, sir, but that was just about.

The Court: I was just thinking about the average. If you did a ton a day—

A. We did a darn good job.

Q.—you think you were doing a good job?

A. We were; yes.

The Court: We will adjourn until tomorrow morning.

(Whereupon an adjournment was taken until 10:00 o'clock a. m. the following day, Thursday, May 18, 1944.)
[1065]

Los Angeles, California, Thursday, May 18, 1944;
10:00 a. m.

(Parties present as last noted.)

The Court: You may proceed.

JAMES W. MARTIN,
resumed.

Further Cross-Examination

Q. By Mr. L. S. Lyon: Mr. Martin, I hand you a copy of United States patent 1,887,692, granted November 15, 1932, on a divisional application, the parent application being filed December 6, 1926. Are you the James W. Martin, Jr., named in the patent? A. I am.

Mr. L. S. Lyon: I will ask that this patent be received into evidence on the cross examination of this witness as Plaintiffs' Exhibit—

The Clerk: 21.

(Testimony of James W. Martin)

Mr. L. S. Lyon: —21.

The Court: Is that listed in this group?

Mr. Miketta: Yes; it is, your Honor.

The Court: Which number?

Mr. Miketta: 1,887,692.

Mr. Foster: I believe it is tab 24, your Honor.

The Court: This is now Exhibit 21?

The Clerk: 21.

[Note: Plaintiff's Exhibit No. 21 will be found in the Book of Exhibits at pages 1353 and 1522.]

Mr. L. S. Lyon: That is all, thank you, Mr. Martin.
[1066]

The Court: Any further questions?

Mr. Miketta: Yes, your Honor.

Redirect Examination

Q. By Mr. Miketta: Mr. Martin, were you as constantly at Maspeth after the summer of 1925 as you had been during the spring and early summer of that year?

A. I was not.

Q. In order to clarify the operation of the machines to which you have referred and in which solidification took place and blocks were ejected or formed as illustrated by Exhibit P, Figs. 2 and 3, is it our understanding that the present plunger progressed toward and away from the outlet of that machine at a rate of about five times a minute?

The Witness: Will you read that question again, please?

(Question read by the reporter.)

A. That is right.

(Testimony of James W. Martin)

Mr. L. S. Lyon: If your Honor pleases—

Q. By Mr. Miketta: Is that a correct statement?

Mr. L. S. Lyon: —I think I will ask counsel to remove the term “our understanding” in the question.

Mr. Miketta: I will rephrase the question, your Honor.

The Court: Never mind rephrasing it; just eliminate that. Is that your testimony, that there were five complete cycles per minute forward and back? A. Yes.

Q. By Mr. Miketta: Was the pressure within the chamber, or [1067] did the pressure within the pressing chamber influence the rate or the number of pressing strokes per minute?

A. If there was appreciable pressure within the chamber, we would have to stop the operation until the pressure was relieved by this valve I have indicated as a vent to relieve the pressure to atmosphere.

Q. So that under those conditions the pressing plunger did not actually move at the rate of five times a minute, but it was stopped and then performed a pressing operation, is that correct? A. That is correct.

Q. And referring now to the operation in which you made your snow in a snow tank and then pressed the snow in the molds, prior to the use of the hydraulic press, do you know the approximate pressures per square inch which were exerted on that block during that pressing operation?

The Court: Are you speaking about the pressing operation or the tamping operation?

Mr. Miketta: The pressing operation in the mold by the hydraulic press, your Honor.

A. The pressure was in the neighborhood of 800 to 1200 pounds per square inch on the block. [1068]

(Testimony of James W. Martin)

* * * * *

Q. By Mr. Miketta: Mr. Martin, during the pressing of snow in the molds and by the use of the hydraulic press did you observe the entry or exit of any gas from that snow?

A. The gas is always flowing from the snow toward the atmosphere; the carbon dioxide gas is flowing from the snow or from the ice outwards away from the snow or ice.

Q. And there is free space for the exit of those gases, is that correct? A. In the tamping operation?

Q. Let us just talk about the molding or pressing of the snow.

The Court: In the press.

Mr. Miketta: In the hydraulic press.

A. Yes; there is space around the loose-fitting plate for the escape of the gases.

Q. Did you observe air entering the block or snow during that pressing operation, or is that possible, in your opinion?

Mr. L. S. Lyon: The same objection.

The Court: Objection sustained.

Q. By Mr. Miketta: If gas is escaping from that snow during the pressing operation, Mr. Martin, is it possible for air to enter the snow, in your opinion?

A. It is not possible.

The Court: I suppose it is proper cross examination, but I would like to have you explain to me so I will understand it; I suppose I have got to understand it ultimately, and I [1070] might as well find out now.

A. So long as you have carbon dioxide in its solid form, whether in snow or in ice, it is evaporating. It

(Testimony of James W. Martin)

cannot stay stationary or still, and if snow, or ice is at any pressures below the triple point, it must exaporate, no matter if you had it under very low temperature, it must evaporate.

The Court: That is what you call sublimed?

A. Yes, sublimed. Every particle of snow is contributing by this evolution to gas, because every particle of snow is below its triple point, the point at which it must evaporate; therefore the flow of gas is both interstitial and on the surface. There is a flow of carbon dioxide; the solid carbon dioxide is bathed in the carbon dioxide gas. Particularly is that true when you are manipulating solid carbon dioxide. Where pressure is being applied to it, there is a large evolution of the gas when you are manipulating it. The gas that has been entrapped is coming out also, so it would be impossible for air to enter the interestices of the snow or ice, because of the rapid outflow.

The Court: That is on the theory that you can't have two streams running in opposite directions, that is, full volume, in a conduit, at one time?

A. That is correct.

Q. Would that same theory be true in this type of device? A. Yes.

Q. In a conduit, if you have it partially full, and you [1071] may have two streams running in opposite directions, if the conduit has maybe an inlet or outlet.

A. A double flow in a conduit calls for a conduit with a relatively large size as compared to the outflow. In this case the interstices are relatively small, so that no air can enter against the flow.

(Testimony of James W. Martin)

The Court: If I had understood your question to be limited that way I would not have asked this question. I did not understand it was so limited.

A. The question has two or three sides. You are making snow, tamping it, and pressing it in the molds. You remove it and put it in the mold. The mold is sitting, first, on a lower platen, so there is a small aperture between the periphery of the mold and the platen. At the top of the mold it has a loose-fitting steel plate. Gas evolving from the snow flows through the restricted aperture between the plate and the sides of the mold, so that no air enters the snow at this point.

The Court: It is almost the same condition above and below?

A. Yes; in both cases there is a small aperture between the sides of the mold and the platen, which makes the double flow, which you mentioned, impossible. You have another situation when tamping. Your mold is sitting on a flat table, so the bottom condition is the same as when you are pressing. In this case, you are consolidating or pressing [1072] the lumps of snow into an open-mouthed vessel, so that the backflow of the gas, while not violent, is sufficient for you to observe it flowing upward out of the mold. I have actually personally done this with my own hands, so it is not of academic interest. The cold gas is visible as it comes in contact with the humid atmosphere. It can be observed flowing over the edges of the mold and down the outside of the mold. In no case does the air penetrate the stream of carbon dioxide, so it cannot penetrate the body of ice in the mold.

The Court: I understand that. The thing I was visualizing was this: Suppose you were operating your

(Testimony of James W. Martin)

press to make triple point ice, we will say, that is almost 100 per cent perfection. On one side of the block there would not be gas escaping on that side, necessarily. Theoretically, there might be no gas going off that side.

A. You will have to have gas escaping at any time up to the time of the triple point. The ice is never stable at atmospheric pressure, at any temperature.

The Court: Yes, that is true.

Mr. Miketta: Your Honor, may I state this: There has been some testimony that air entered the snow during tamping, in this operation, and I want to clarify that point with Mr. Martin while he is on the stand.

The Court: That's got me a little confused.

Mr. Morris: I think probably the statement of learned [1073] counsel is directed to something I said. If so, my recollection is this: When you shovel snow out of the snow tank on a humid day, or any day, and shovel that snow into the mold into which it is to be later pressed, then you have commingled with the snow you are shoveling, the air. I do not recall making the remark that air entered during the actual pressing operation. That is foreign to any thought that I have, if I ever had any such thought.

The Court: That is why I am asking these questions. Naturally, when you are taking the snow out of the chamber, and putting it into the tank, you are going to have contact with atmosphere; when you are taking it out of the tank and putting it in the press, you are going to have contact with atmosphere, and when you have got two platens in a solid box, with restricted orifices, and the gas is coming out, no air would get in.

Mr. Morris: There is no doubt about that.

(Testimony of James W. Martin)

The Court: I thought there was some conflict.

Mr. Morris: The tamping is to exclude that air that has gotten mixed in during the shoveling of the snow from the snow tank into the mold; and you are getting as much as you can get of the CO₂ gas out at the same time and during the pressing the gas is flowing out.

The Court: Then there may be air in there that is going to go out with the gas.

A. Sir, that isn't my experience. When you are [1074] shoveling the snow out you are taking broken chunks of snow out, and it is certain while so much gas is coming off, there is not commingling of air. In other words, when this snow is put down into the mold there would be no opportunity for any air to flow against the stream of outrushing gas. If your Honor will permit, I think I can resolve the difference in the points raised by counsel.

The Court: Go ahead.

A. In inexpert operation, in careless operation of the snow tank, you will open the door, and the air will rush in, and will be condensed on the sides of the snow tank, and be condensed in the upper strata of gas layer. Always on the top of the layer of cold gas you will condense and freeze the moisture of the air. This being heavy, will precipitate down on the snow.

Q. By Mr. Miketta: Under what conditions would air rush into the snow tank?

A. Only when the tank has been left open for an unusually long time. The same condition would obtain when one produces ice in the snow chamber. There, again, if an inexpert operator operates it, he drops the bottom platen, and I have seen this done—the man leaves

(Testimony of James W. Martin)

the bottom platen down, and the gas being heavy falls out of the chamber by its own weight, and the air rushes up into the snow chamber to take the place of the gas. The water from the air condenses on the cold sides of the chamber, and [1075] falls on the next block, and forms a water ice layer on the block that comes from the vertical press, as shown in Figure 5. The same condition occurs in both cases.

An inexpert operator will permit air to flow into the chamber when the separate snow tank is part of the press, just the same as he would in the case of the snow tank. I believe a little misstatement has been made, when it was said that the air was occluded between chunks of snow put in the mold, because there is too much outrushing gas. In the 10 by 10 mold sufficient gas is coming out, so the air is purged from the upper portion of the mold by the outgoing CO₂ gas.

Mr. L. S. Lyon: The point of my objection is that the witness has not laid any foundation for the diagram, I am informed, by actual measurement. The witness has not testified to having made any measurements along that line, showing at the point indicated on the diagram, the CO₂ which is indicated on the diagram, that the atmosphere at that point contains 50 or 60 per cent air, and no one can trace accurately what the witness is testifying about unless he had made some measurements.

The Court: Give us your judgment about that.

Mr. Miketta: May we see what that is, your Honor?

The Court: Come right up.

A. I think this could be essentially correct. (Referring to diagram.) It all depends on what portion of this gas you are to take your sample. You have your

(Testimony of James W. Martin)

mold. [1076] The mold is 16 inches high, in that general neighborhood, by 10 by 10, which is shown here. Of course, when you finish tamping the mold is essentially filled, but if it is only half full, we have the gas flowing upward out of this, and the gas being heavier it would flow over the sides, and not directly up, and come down as quickly as possible. The percentage of air is dependent on where you take your sample. I think 99 out of 100 men that have seen this operation would go along with me, that at this lower point, which is the only point we are interested in, just above the surface of the snow, at this point, to reach this point the air could not flow down against the cold uprising carbon dioxide gas. This is correct (pointing to diagram), but it is a question of degree. [1077]

The Court: Mark that first little point "A" with a line to it, and the other one "B" just above the top of the snow.

The Witness: Shall I put "snow" down here?

The Court: And put "snow" down there.

Q. By Mr. Miketta: Am I correct, Mr. Martin—pardon me.

The Court: And put an arrow on the flow of gas around and down. Let that be the next exhibit illustrating the testimony of this witness.

Mr. L. S. Lyon: May I have this sketch which I produced and which the witness referred to in his testimony marked?

The Court: Let that also be combined with this and marked as one exhibit. The white one is the one produced by Mr. Lyon and about which he talked, and the

(Testimony of James W. Martin)

other one is the one that he made. Better mark one with the number and the other with an "A" following it.

The Clerk: This next number is 22.

[Note: Plaintiff's Exhibit No. 22 will be found in the Book of Exhibits at page 1354.]

[Note. Plaintiff's Exhibit No. 22a will be found in the Book of Exhibits at page 1355.]

The Court: Right.

Mr. Miketta: May I have that back as soon as you can?

The Court: That diagram, that little white one, was exactly the thing that was bothering me and I guess I am finally straightened out.

The Clerk: Is this in evidence, your Honor, or for identification?

The Court: No; in evidence to illustrate the testimony of this witness. [1078]

Q. By Mr. Miketta: As you have drawn there a partially filled mold on Exhibit 21, Mr. Martin, if snow forms a surface, let us say, halfway up that mold, then, if I understand your testimony correctly, gas is evolved from that snow and rises in that mold just as if you were pouring water into the mold and causing a surface or upper surface of a body of water to rise in that mold until it overflows over the sides, is that correct?

A. That is correct. Now, may I give you an illustration to show you? There is a shadow of incorrectness in it that I would like to—

(Testimony of James W. Martin)

Q. In the center of this there may be some eddies, is that correct?

A. There may be a question raised, as you are comparing a gas with liquid, one having a meniscus, we will say, at the surface, and the other not having such. May I give you an illustration to show what is, I think, in your mind and is certainly in mine?

Q. You may.

A. When you pack certain fruits and certain nuts, cashew nuts, to be more exact, which has been done, if you will put a little pellet of dry ice into the can, the dry ice melts or sublimates, the gas rises and purges out of this can all of the air that was contained in the can; so that in practice, in commercial practice, it is doing just what you say. I only offered this other because someone will raise that question [1079] of liquid, having a meniscus, is going to be different from gas which does not.

Mr. Miketta: That will be all.

* * * * *

Mr. Foster: * * *

Q. Mr. Martin, you have testified on your cross examination by Mr. Lyon with respect to the state of your recollection as to the date when operations were commenced at the plant at Sixth and East River, and your recollection of the dates when you had constructed and when you operated devices such as illustrated in Defendants' Exhibits L, O, and P. I wish to inquire about the state of your recollection as to the event of the commencement of the operations of the snow tank at the plant at Sixth and East River, as contrasted with the state of your recollection as to the date when such [1080]

(Testimony of James W. Martin)

operations commenced. What is the state of your recollection as to the event of the commencement of operations of the snow tank at Sixth and East River?

A. My recollections of the events at the Maspeth plant, in which we first made commercial dry ice, is very vivid. I spent all of my time there, long hours, I was intensely interested in what I was doing because it was, I thought, and positively think now—it was the first time that commercial dry ice was made and sold as an article of commerce. It was—well, every man has got a right to a little conceit. I was conceited to think that I was doing something first. It was that time, the events of that time that are vivid. If I were looking back on a lifetime, they would still be vivid, standing out. After the peak of production season, after the rush of events slowed down, I spent more and more time in the office, working on ways to use this product; out visiting customers, seeing their problems, seeking ways of using the product. I find it much more difficult to remember things that happened in this quiescent period—quiescent as far as the production is concerned—than I did back when we were in the heat of battle, if you will, for production.

Q. What is the state of your recollection, regardless of the date when operations commenced, operations of the snow tank at the plant at Sixth and East River, as to whether you had manufactured and did operate the devices illustrated in [1081] Defendants' Exhibits L. O., and P before or after the event of the commencement of the snow tank operations at the plant at Sixth and East River?

The Witness: May I have that question back so I am sure?

(Testimony of James W. Martin)

Mr. Foster: Yes.

(Question read by the reporter.)

Mr. L. S. Lyon: I would like to ask counsel, through your Honor, if he would identify the plant by using the term "Maspeth" or "General Carbonic" rather than "the plant at Sixth and East River," because I am afraid there is going to be some difficulty there.

Mr. Foster: I will be glad to, your Honor. I was referring by the plant described as "at Sixth and East River," to the General Carbonic plant.

Mr. L. S. Lyon: Well, I object to that on the ground that the witness has not testified to using the devices of Exhibit P at the General Carbonic plant at all.

Mr. Foster: My question does not contemplate that he had.

The Court: No; I did not think so. You may answer.

A. I am confident, beyond any shadow of a doubt, that we operated the devices as shown in Exhibit P and the Haynes type of press with a snow tank, Exhibit L—will you read me back my answer so far?

(Answer read by the reporter.)

A. —prior to the time that we commenced operation at the General Carbonic's plant at Sixth Street and East River. [1082]

Q. By Mr. Foster: In your cross examination by Mr. Lyon you stated that you were employed by Dry Ice Corporation on January 16, 1925 and your activities with relation to these devices illustrated in Defendants' Exhibits L, O, and P commenced very shortly thereafter. Have you in your possession any record relating to your employment at that time that was made during or near the close of that employment? A. I have.

(Testimony of James W. Martin)

Q. Would you produce that, please?

The Court: Before we go to that, Mr. Martin, in order to clarify me, did you intentionally omit O in the classification of the instrumentalities used prior to the operation at the Carbonic plant?

A. No, sir. I should have included O as one of the transition stages. It was unintentionally omitted.

Q. Then, the same statement is true as to the use of that instrument prior to the time that you moved over to the other plant?

A. That is true; yes, sir.

The Court: All right. Now, go ahead, Mr. Foster.

Mr. Foster: Thank you, your Honor.

Q. You have produced here a document dated in the first line of page 1 "November 30, 1928."

I have handed it to plaintiffs' counsel.

Mr. L. S. Lyon: If this is going to be used by the witness, I would like to have it marked for identification, [1083] as there are some parts of it that I will desire to call the court's attention to in argument.

The Court: Yes; have it marked for identification as Defendants' next in order.

The Clerk: Defendants' S.

The Court: S? A. S.

The Court: S for identification.

[Note: Defendants' Exhibit S will be found in the Book of Exhibits at page 1391.]

Q. By Mr. Foster: On page 13 of this agreement are some signatures, one purporting to be that of James Wellford Martin, Jr. Is that your signature?

A. That is my signature.

(Testimony of James W. Martin)

Q. Do you recognize any of the other signatures on that page?

A. The signature for the Dry Ice Corporation of America was Robert R. Rust, president; the signature for attest is E. Lawrence, E. R. Lawrence, who was secretary of the company; and I recognize the seal of the company there.

Q. When did you acquire this copy of this agreement dated November 30, 1928?

A. It was either on November 30th or on December 1st, of 1928.

Q. And where has it been since you first acquired possession of it?

A. It has been in my possession.

Q. Have any changes, additions, or alterations been made [1084] in it since it first came into your possession?

A. No. The only changes that were made were initialed at the time of signing.

Q. And by that last answer you are referring to such indicated changes and initials in the margin as appear on page 5?

A. That is correct.

Q. I note on page 4 reference is made to the time of Martin entering the employment of the predecessor of the company on the 16th day of January, 1925. Is this the document to which you referred as confirming your statement made on cross examination that you entered the employ of the Dry Ice Company on that date?

A. It is.

Mr. Foster: It is offered in evidence, your Honor, as Defendants' Exhibit S. [1085]

[Note: Defendants' Exhibit S will be found in the Book of Exhibits at page 1391.]

(Testimony of James W. Martin)

* * * * *

The Court: There being no objection, the instrument will be received into evidence and marked as the defendants' next in order. Hand it back to Mr. Morris, if you will.

Q. By Mr. Foster. Your obligations expressed in the agreement, Exhibit S, you performed, Mr. Martin?

A. They were. I received letters saying that they had been.

Mr. Foster: Nothing else.

Mr. L. S. Lyon: I have no questions, Mr. Martin, thank you.

* * * * *

Mr. Foster: Next, if the court please, I wish to introduce and read into the record certain of defendants' requests for admissions and the answers contained in plaintiffs' sworn statements in response thereto. And I will hand two copies of a summary of such requests and statements to the clerk and a copy to plaintiffs' counsel. But I believe that I can, during the progress of reading them into the record, eliminate the necessity for including all of them contained in the summary. First, "Defendants' request for admissions filed April 17, 1944, and plaintiffs' sworn statement in response thereto dated April 25, 1944."

No. 2. [1088]

* * * * *

The Court: * * *

In order to have this identified so that you may refer to it, let it be marked for identification, then hand it back to me.

The Clerk: Defendants' T.

Mr. Foster: First, is the Defendants' Exhibit T. Defendants' requests for admissions filed April 17, 1944, and plaintiffs' sworn statement in response thereto dated April 25, 1944.

No. 2. "'Compressed gas' refers to a substance which is normally gaseous and which has been compressed to a superatmospheric pressure but which is still in gaseous form."

Response to. "Plaintiffs admit the truth of the matters contained in paragraph 2 of defendants' Request for Admissions depending upon the context in which the term 'compressed gas' is used."

"3. 'Liquefied gas' refers to a substance, gaseous at ordinary temperature and pressure, which has been placed under temperature and pressure conditions capable of converting such gas into a liquid." [1089]

Response 3. "Plaintiffs admit the truth of the matters contained in Paragraph 3 of Defendants' Request for Admissions depending upon the context in which the term 'liquefied gas' is used."

"9. A 'compression chamber' may be a housing, receptacle, mold, cylinder, container or walled object in which a substance or material is subjected to pressure."

Response 9. "Plaintiffs admit the truth of the matters contained in Paragraph 9 of Defendants' Request for Admissions depending upon the context in which the term 'compression chamber' is used." [1090]

* * * * *

Mr. Foster: Very well. I will offer request 13, appearing on page 3 of the summary.

"Prior to the earliest date of invention claimed by the plaintiffs for the subject matter of the patent in suit, there was known to others or disclosed in patents and printed publications the following fact, which fact is not the invention covered by, or asserted by Plaintiffs to be covered by, any of the claims of the patent in suit relied upon: That any suitable apparatus can be used in compressing carbon dioxide snow into blocks. (To facilitate plaintiffs' answers to Request 13, copies of the following patents are attached thereto, pertinent portions thereof being underlined in red and figure legends similarly identified:

Elworthy	579,866
Slate	1,546,681
Martin	1,659,435

British:

Elworthy 7,436 of 1895)."

Third sentence omitted from the request.

Response to requests 12 to 16, reading 12 to 16, inclusive, of defendants' requests for admissions as at the [1092] dates appearing thereon:

"Plaintiffs admit the application for and the grant of the Letters Patent referred to in Paragraphs 12 to 16, inclusive, of defendants' Request for Admissions as of the dates appearing thereon. Plaintiffs deny that any matters set forth in any of said patents or publications having an effective date earlier than the effective date of the claims here in issue, describes or anticipates the invention of the claims here in issue." [1093]

Mr. Foster: No, sir; not until 17, on page 9, if the court please.

"17. It has been heretofore determined by the United States Patent Office, after proceedings involving the application for the patent in suit, duly had, and hearings held, by a decision which has become final, that Harry W. Cole and Malcolm W. McLaren did not invent the following combination and that the patent in suit does not cover the following combination:

"(1) An expansion chamber;"— [1094]

Mr. L. S. Lyon: May I ask what we are reading now, your Honor?

Mr. Foster: Request 17, page 9, Mr. Lyon.

* * * * *

Mr. Foster * * *

Continuing at the top of page 10 as to this combination, we find in the requests that was not, according to the requests, the invention of Cole and McLaren.

"(1) An expansion chamber;

"(2) A compression chamber in gas-light communication with the expansion chamber;

"(3) Rotary scrapers in the expansion chamber above said communication; [1095]

"(4) Means for expanding liquefied gas to produce an accumulation of solidified gas in the compression chamber;

"(5) Means including a plunger arranged to close communication between said chambers and to compress the solidified gas.

“(In order to facilitate Plaintiffs’ answer hereto, attention is specifically called to Count 7 of Interference No. 59,938 and the decision of the Examiner of Interferences awarding priority to Gustave T. Reich, the decision being dated October 12, 1935.)”

In response to request 17, the first sentence omitted.

“17. The Reich application referred to in defendants’ request No. 17 was abandoned, but prior to the abandonment of said application priority of invention in Interference No. 59,938 was awarded to Gustave T. Reich over Harry W. Cole and Malcolm W. McLaren for a count reading as follows:

“‘A refrigerating apparatus, comprising an expansion chamber, a compression chamber below and in gas-tight communication with the expansion chamber, rotary scrapers in the expansion chamber above said communication, means for expanding liquefied gas to produce an accumulation of solidified gas in the compression chamber, and means, including a plunger, arranged to close communication between said chambers and to compress the solidified gas.’” [1096]

* * * * *

The Court: Let the objection be registered, and the court will withhold its opinion until later. You may proceed. [1109]

* * * * *

Mr. Foster: 18. “It has been heretofore determined by the United States Patent Office, after proceedings involving the application for the patent in suit duly had and hearings held, by a decision which has become final, that Harry W. Cole and Malcolm W. McLaren did not invent

the following combination and that the patent in suit does not cover the following combinations:

- (1) An expansion chamber;
- (2) A compression chamber below and in gas-tight communication with the expansion chamber;
- (3) Rotary scrapers in the expansion chamber [1110] above said communication;
- (4) Means for expanding liquefied gas to produce an accumulation of solidified gas in the compression chamber;
- (5) Means including a plunger, arranged to close communication between said chambers and to compress the solidified gas;
- (6) A movable closure against which the solidified gas is compressed.

(In order to facilitate Plaintiffs' answer hereto, attention is specifically called to Count 8 of Interference No. 59,938, priority as to such count being awarded to Gustave T. Reich by the Examiner of Interferences on October 12, 1935.)"

Mr. L. S. Lyon: May I ask your Honor, when you are reflecting on this matter in your chambers, to reflect on this question. It seems to me it is a hideous question.

The Court: I have already reflected on it.

Mr. Foster: Will your Honor reflect also on the fact that the plaintiffs experienced no difficulty in presenting the answer I will read.

Mr. L. S. Lyon: If you will read the entire answer you will find we did have some difficulty.

Mr. Foster: I will skip the first sentence.

"18. . . . The Reich application referred to in defendants' request No. 18 was [1111] abandoned, but prior to the abandonment of said application priority of invention in Interference No. 59,938 was awarded to Gustave T. Reich over Harry W. Cole and Malcolm W. McLaren for a count reading as follows:

" 'A refrigerating apparatus comprising an expansion chamber, a compression chamber below and in gas-tight communication with the expansion chamber, rotary scrapers in the expansion chamber above said communication, means for expanding liquefied gas to produce an accumulation of solidified gas in the compression chamber, means, including a plunger, arranged to close communication between said chambers and to compress the solidified gas, and a movable closure against which the solidified gas is compressed.' "

Mr. L. S. Lyon: May I ask your Honor if now is the time for us to ask for the remainder of the reply to be received which has been omitted by counsel? If the part offered is to be received, or should we wait until a later time?

The Court: Wait until a later time, but if you want to [1112] object on the same ground you should do so.

Mr. L. S. Lyon: I want to make the same objection as I made to 17.

The Court: The objection will be understood as being made, and the matter will stand submitted.

Mr. Foster: 19. "It has been heretofore determined by the United States Patent Office, after proceedings involving the application for the patent in suit duly had

and hearings held, by a decision which has become final, that Harry W. Cole and Malcolm W. McLaren did not invent the following combination and that the patent in suit does not cover the following combination:

- (1) A compression chamber;
- (2) Means for expanding a liquefied gas to form an accumulation of solidified gas in said chamber;
- (3) A plunger for compressing the material in said chamber;
- (4) A conduit at the end of the chamber opposite to the plunger for withdrawing gas from the chamber.

(In order to facilitate Plaintiffs' answer hereto, attention is specifically *call* to Count 2 of Interference No. 62,902 and the decision of the Examiner of Interferences awarding priority to Gustave T. Reich, the decision being dated May 9, 1932.)" [1113]

And the response to 19, the first sentence omitted:

19. ". . . The Reich application referred to in defendants' Request No. 19 was abandoned, but prior to the abandonment of said application priority of invention in Interference No. 62,902 was awarded to Gustave T. Reich over Harry W. Cole and Malcolm W. McLaren for a count reading as follows:

" 'A gas solidifying apparatus comprising a compression chamber, means for expanding a liquefied gas to form an accumulation of solidified gas in said chamber, a plunger for compressing the material in said chamber, and a conduit at the end of the chamber opposite to the plunger for withdrawing gas from the chamber.' "

Mr. L. S. Lyon: Same objection.

The Court: Same ruling.

Mr. Foster: And Request 20:

"It has been heretofore determined by the United States Patent Office, after proceedings involving the application for the patent in suit duly had and hearings held, by a decision which has become final, that Harry W. Cole and Malcolm W. McLaren did not invent the following [1114] combination and the patent in suit does not cover the following combination:

- (1) Means for forming a liquefied gas into solid particles;
- (2) Means for compacting the particles into a solid mass;
- (3) Means for supplying gas under pressure to the compression means to operate it.

(In order to facilitate Plaintiffs' answer hereto, attention is specifically called to Count 3 of Interference No. 59,938 and the decision of the Examiner of Interferences awarding priority to Gustave T. Reich, the decision being dated October 12, 1935.)"

The response to 20, the first sentence omitted:

". . . The Reich application referred to in defendants' Request No. 20 was abandoned, but prior to the abandonment of said application priority of invention in Interference No. 59,938 was awarded to Gustave T. Reich over Harry W. Cole and Malcolm W. McLaren for a count reading as follows:

" 'In a system of the type described the combination with means for forming a liquefied gas into solid particles, and means for compacting the particles [1115] into a solid

mass, of means for supplying gas under pressure from said system to said compressing means to operate it.' ”

Mr. L. S. Lyon: The same objection.

The Court: It may be registered. The same ruling.

Mr. Foster: Request 21:

“Plunger 61, described and shown in the patent in suit, is movable in the compression chamber 60, which is in gas-tight communication with the snow chamber 50.”

And the response:

“Plaintiffs admit the truth of the matters contained in Paragraph 21 of defendants’ Request for Admissions.”

Request 22:

“Means 16 and 90 are described in the patent in suit for supplying gas under pressure to the means which operate means for compacting carbon dioxide snow into a solid mass.”

Mr. L. S. Lyon: I think these are improper, your Honor, but they are harmless. I am not going to ask your Honor to struggle with these, but I would like it understood that in not objecting to the latter, even though they can be objected to on the same ground as 17 to 20, we are not conceding 17 to 20 are proper.

Mr. Foster: The response to 22:

“Plaintiffs admit the truth of the mat- [1116] ters contained in Paragraph 22 of defendants’ Request for Admissions.”

Next, omitting Request 23.

Request 24:

“The valve 39, shown in Fig. 1 of the patent in suit, controls the introduction of liquid gas into the so-called

snow-forming and pressing chambers, and, as shown and described in the patent in suit, such valve 39 is opened and closed by the motion of the pressing plunger."

And the response to 24:

"Plaintiffs admit the truth of the matters contained in Paragraph 24 of defendants' Request for Admissions."

Mr. L. S. Lyon: I understand that 23 is not offered?

Mr. Foster: I so stated, Mr. Lyon. [1117]

Omitting request 25. Request 26:

"The patent in suit, No. 2,025,698, does not state or describe what is 'a definite pressure':

"(1) By way of example;

"(2) In figures;

"(3) In terms of pounds, atmospheres, inches of mercury;

"(4) In words."

The response, part of sentence omitted: "* * * hence the term 'a definite pressure' is not defined or described by way of example, in figures, in terms of pounds, atmospheres, inches of mercury, or in words."

Mr. L. S. Lyon: I object to that as fragmentary, and not coming within your Honor's rule that admissions as such may be received as a separate part of a document or separate part of an answer. This is part of a sentence, and apart from the rest of the sentence, the context cannot be known to your Honor.

The Court: I think that is true. I will ask counsel to read in enough of that answer so that I can really see what it is.

Mr. Foster: We urge that is the part that is relevant.

The Court: I will ask you to read the entire answer.

Mr. Foster: I will read the entire answer.

“The defendants’ request No. 26 cannot be either truthfully admitted or denied categorically, for the implications of such admission or denial would be contrary to the fact in [118] that ‘a definite pressure’ is to be read in the light of the specification of the patent in suit and the prior art and need no definition by way of example, in figures, in the terms of pounds, atmospheres, inches of mercury, or in words, and hence the term ‘a definite pressure’ is not defined or described by way of example, in figures, in terms of pounds, atmospheres, inches of mercury, or in words.” [1118-A]

The Court: The whole answer will be admitted at this time.

Mr. Foster: May the defendants have an objection of record to the addition of the first part of that answer, as non-responsive to the request?

The Court: Yes. It may be argumentative, but I think that it is like taking a part out of a particular matter; it is difficult to separate it. The answer is argumentative, but those four lines, standing alone, do not mean just what they may possibly mean when they are taken in their context. Therefore, I have asked to have the whole thing. Proceed. [1119]

* * * * *

Mr. L. S. Lyon: That is correct.

Mr. Foster: Request 31: “Application for United States Letters patent Serial No. 152,754, for Improvement in Carbon Dioxide Ice Apparatus, Process and Product,

naming James W. Martin, Jr. of Yonkers, Westchester County, New York:

- “(1) Was filed in the United States Patent Office December 6, 1926;
- “(2) Was assigned during its pendency in the United States Patent Office to Dryice Corporation of America;
- “(3) Was thereafter, and during its pendency in the United States Patent Office, assigned to Adico Development Corporation; [1126]
- “(4) Became abandoned by failure of the owner of said application to file a response to the Patent Office action of November 19, 1935, although claims were allowed in said application.”

Response to 31: “Plaintiffs admit the truth of the matters contained in Paragraph 31 of defendants’ Request for Admissions.”

Mr. L. S. Lyon: That is objected to on the ground it is incompetent; and I call your Honor’s attention to the fact that a certified copy of that application has already been offered in evidence by the defendants.

Mr. Foster: The certified copy does not, I think, contain all sought by this request and admitted by the plaintiffs. It does not include the formal assignments.

Mr. Miketta: May I call your Honor’s attention to the fact that in the last two answers, 30 and 31, the plaintiffs did not reserve any objections whatsoever. And I am just wondering whether it is proper at this late time to consider objections which were not even reserved in their answers.

The Court: I am going to reserve a ruling on this also, to be sure.

Mr. Foster: Request 33. "Neither of the Plaintiffs nor any predecessor of either of them ever gave notice to any of the Defendants or any of the predecessors of the Defendants employing any of the devices, the use of which is complained of herein, that such use was an infringement of the patent in [1127] suit until after October 1, 1941."

Response to the second and third paragraphs omitted.

"Plaintiffs admit that neither of the plaintiffs nor any predecessor of either of the plaintiffs ever gave notice to any of the defendants that the use of the accused apparatus was an infringement of the patent in suit until after October 1, 1941."

The Court: We will adjourn until 2:00 o'clock.

(Whereupon a recess was taken until 2:00 o'clock p. m. of the same day.) [1128]

AFTERNOON SESSION

2:00 O'CLOCK

The Court: Proceed.

Mr. Miketta: May the court please, at this time I would like to introduce into the record certain of defendants' requests for admissions, filed August 17, 1942, and plaintiffs' admissions in response thereto, filed September 8, 1942. And, with your Honor's permission, these are guilty of being written on short paper and we would like to have the opportunity of rewriting them.

The Court: Let them be marked for identification the next number.

The Clerk: Defendants' U. [1129]

* * * * *

Mr. Miketta: Request 31: "That prior to May, 1928, it was known that when liquid carbon dioxide is admitted into a chamber a part of the liquid is converted into carbon dioxide snow, as evidenced by statements appearing in Slate patent No. 1,546,682." [1157]

"(31) Plaintiffs admit, in response to defendants' request for admission No. 31, that prior to May, 1928, it was known that carbon dioxide snow could be made under the conditions set forth in Slate Patent No. 1,546,682 which issued July 21, 1925; but plaintiffs deny that liquid carbon dioxide is converted into carbon dioxide snow under all conditions when liquid carbon dioxide is admitted into a chamber."

Request 32:

"That the operation of the Slate apparatus described and illustrated in patent No. 1,546,682, includes the steps of: introducing liquid carbon dioxide into the cylinder 22, converting a portion of the liquefied carbon dioxide gas into a solid and a portion thereof into a gas by expansion; accumulating a mass of the solidified gas in the cylinder, and withdrawing the unsolidified gas from the cylinder through outlet 28."

Admits 32:

"Admitted, subject to all pertinent objections to admissibility which may be interposed at the trial."

In order to shorten this, your Honor, we can eliminate from consideration Request 33. [1158]

34: "That the operation of the Slate apparatus described and illustrated in patent No. 1,546,682, includes the steps of: introducing liquid carbon dioxide into the cylinder 22, converting a portion of the liquefied carbon

dioxide gas into a solid and a portion thereof into a gas by expansion; accumulating a mass of the solidified gas in the cylinder, withdrawing the unsolidified gas from the cylinder through outlet 28, and shutting off the supply of liquefied carbon dioxide gas to the cylinder by operating valve 5' after a desired mass of solid carbon dioxide has been accumulated in the cylinder 22."

There is an answer that covers 34 to 41.

Admit, subject to all pertinent objections to admissibility which may be interposed at the trial.

Request 35:

"That the Slate patent No. 1,546,682 shows a cylinder 22 provided with an inlet pipe 24 through which liquid carbon dioxide may be supplied to the cylinder, and an outlet 28 for gas in communication with the cylinder."

Admits (34) to (41)

"Admitted, subject to all pertinent objections to admissibility which may be interposed at the trial."

Request 37:

"That, as shown and described in Slate patent No. [1159] 1,546,682, unsolidified gas is discharged from a snow chamber 22 and is led by line 28 into counter-current, heat exchange relation with liquefied gas, which liquefied gas is then passed by line 26 into the snow chamber, the exchanger being indicated at 30."

Admits (34) to (41).

"Admitted, subject to all pertinent objections to admissibility which may be interposed at the trial."

Request 38:

"That, as shown in Fig. 1 of patent No. 2,025,692 and described in said patent, unsolidified gas is discharged from a snow chamber and is led by line 80 into countercurrent, heat exchange relation with liquefied gas in heat exchanger 40, liquefied gas from such heat exchanger being then passed by line 38 into the snow chamber."

Admits (34) - (41).

"Admitted, subject to all pertinent objections to admissibility which may be interposed at the trial."

Mr. L. S. Lyon: I have no objections to make down to 52 in this memorandum, and, if satisfactory, they can be copied into the record as read, without actually reading them. I don't see how your Honor can be getting anything out of this reading, because you haven't got the Slate [1160] patent, and nobody has explained it to you.

The Court: That's right.

Mr. Miketta: In these various requests, your Honor, we show a long list of prior patents, and some of them, at least, show that the same construction as this claimed in the patent in suit also appeared in these prior patents.

The Court: Let us just consider those are all read into the record down to including 51.

"39. That in Figs. 1 and 2 of patent No. 2,025,698 a chamber is shown at 50, means for supplying a liquefied gas to said chamber to convert a portion of the liquefied gas into a solid and a portion into a gas are indicated by line 38 and nozzles 51, and a conduit for withdrawing gas from the chamber is indicated at 80.

“(34) – (41). Admitted, subject to all pertinent objections to admissibility which may be interposed at the trial.

“40. That in patent No. 2,025,698 chamber 50 is identified as a snow chamber in which liquefied gas is expanded and a portion of such liquefied gas is converted into a solid while a portion thereof is unsolidified and is withdrawn through line 80.

“(34) – (41). Admitted, subject to all pertinent objections to admissibility which may be interposed at the trial. [1161]

“41. In patent No. 2,025,698 chamber 60 is identified as a compression chamber.

“(34) – (41). Admitted, subject to all pertinent objections to admissibility which may be interposed at the trial.

“42. With particular reference to Fig. 5 of patent No. 2,025,698, the chamber 100 is provided with a loose-fitting piston 103 so that gas may pass past the piston and through openings 101 into jacket 102, the lower portion of the jacket, illustrated in Fig. 5, showing a port communicating the jacket with the atmosphere.

“(42). In response to defendants’ request for admission No. 42, plaintiffs admit that chamber 100 illustrated in Fig. 5 of Patent No. 2,025,698 is provided with a loosely fitting piston 103 so that gas may pass past the piston and through openings 101 into jacket 102. Plaintiffs deny that the lower portion of the jacket 102 illustrated in Fig. 5 shows a port communicating the jacket with the atmosphere. On the contrary, the patent discloses that the port is connected with pipe 80.

"43. That the Martin patent No. 1,659,435 shows a chamber [1162] 10 provided with an inlet pipe 16, a nozzle 17 through which liquid carbon dioxide may be supplied to the chamber, and an outlet for gas including the screen 23, a space around the chamber 10 and conduit 11.

"(43) - (47). Admitted, subject to all pertinent objections to admissibility which may be interposed at the trial.

"4. That in the operation of the apparatus described and illustrated in patent No. 1,546,682 the volume of cylinder 22 is maintained constant while liquefied gas is expanded in such cylinder.

"(43) - (47). Admitted, subject to all pertinent objections to admissibility which may be interposed at the trial.

"45. That in the operation of the apparatus described and illustrated in patent No. 1,659,435 the volume of the metal casing delineating chamber 10 is maintained constant while liquefied gas is expanded in such chamber.

"(43) - (47). Admitted, subject to all pertinent objections, to admissibility which may be interposed at the trial.

"47. Prior to May, 1926, it was known that carbon dioxide snow could be compressed into dense cakes and in this connection plaintiffs' attention is called to the following: [1163]

"'The carbon dioxide snow, as it thus comes from the refrigerating chamber, is porous and light, but is then compressed by any suitable apparatus into dense cakes of any convenient size to fit the requirements of the trade.'

(Slate patent No. 1,546,681, issued July 21, 1925, page 1, lines 104-109).

“(43) – (47). Admitted, subject to all pertinent objections to admissibility which may be interposed at the trial.

“48. That prior to May, 1928, the use of hydraulic means or pistons operated hydraulically to hold and move a breech block of a machine for the manufacture of solid carbon dioxide was known to persons other than Harry W. Cole and Malcolm W. McLaren as evidenced by matters published February 14, 1928 in patent No. 1,659,431 to Walter S. Josephson, including page 3, lines 24-33 thereof.

“(48). Plaintiffs deny defendants’ request for admission No. 48 but plaintiffs admit that patent to Josephson No. 1,659,431, page 3, lines 24-36 inclusive, states:

“‘It will be evident that while I have shown one apparatus whereby my method may be practiced, the desired [1164] constant or follow-up pressure may be applied in other ways, as, for instance, by pistons forced downward upon the liquid in the ice chambers 41 after the chamber has been filled and cut off; the removable breech blocks may be held in any desired way as, for instance, by hydraulic pressure; and the freezing refrigerant may be supplied by any suitable refrigerating machine instead of by the expanded nitrogen product as above described.’

“50. In patent No. 1,631,037 there is shown an apparatus including a chamber 4 having walls da, a compressing plunger 3 carried by ram 2, the plunger 2 operating within the chamber 4, and a hydraulically operated head 12 upon ram 11 adapted to close the end of chamber 4 and against which material may be compressed by the plunger 3.

"(50). Plaintiffs admit that in Patent No. 1,631,037 there is shown an apparatus ('for dehydrating masses of boiled garbage, packing house tankage, or other matter of similar nature'), including a chamber 4 having walls 4a, a compressing plunger 3 carried by ram [1165] 2, the plunger 3 operating within the chamber 4, and a hydraulically operated head 12 upon ram 11 adapted to close the end of chamber 4 and against which material may be compressed by the plunger 3.

"51. In patent No. 1,631,037, and particularly Figs. 1 and 2 thereof, an apparatus is described including means for permitting the withdrawal of fluid from chamber 4, such means including openings 30, 31, 33 and pipe 34.

"(51). Admitted, subject to all pertinent objections to admissibility which may be interposed at the trial."

(Short recess.)

Mr. Miketta: The next request is 53.

The Court: You skip 52?

Mr. Miketta: Yes.

Request 53:

"53. That Plaintiff INTERNATIONAL CARBONIC, INC. has acquired the exclusive right to issue licenses under at least forty patents pertaining to various modifications in methods of making solid carbon dioxide and apparatus for use in the manufacture of solid carbon dioxide, and has offered licenses thereunder to manufacturers of solid carbon dioxide, such [1166] licenses providing, among other conditions—

(a)—that the licensee pay plaintiff a royalty on each pound of solid carbon dioxide made by the licensee,

(b)—that such royalty be paid whether or not solid carbon dioxide made by the licensee is manufactured in accordance with the methods and apparatus of any one of the licensed patents.”

Admission 53:

“(53). Plaintiffs deny defendant’s request for admission No. 53 but plaintiffs admit that they have offered to manufacturers of solid carbon dioxide licenses in the form of Exhibit 2 (with the exception of the written notations thereon) annexed to defendant’s request for admissions. . . .

The last sentence is omitted.

Mr. Foster: I will state, for the information of the court, that Exhibit 9, which is not attached, was attached to the original requests, and does contain such a provision to indicate the reason for the conclusion therein made, which, with the court’s permission, we will withdraw from the exhibits, from the original requests, and attach it to the summary, so it is complete.

The Court: Yes, if you put it in the final form.
[1167]

* * * * *

Mr. Miketta: Request 61. “That Exhibit 9, appended [1185] hereto, is a true copy of the license which was offered to defendant by plaintiffs.”

The Court: Now we are getting down to the meat of the cocoanut. It is like taking two or three hours to argue the question, and then finally the witness says no.

Mr. Miketta: 61: “Plaintiffs admit that Exhibit 9 (but without the written matter thereon), appended to defendant’s request for admission, is a true copy of the license which was offered to defendant by plaintiffs.”

And I ask leave to have that appended to the summary, your Honor.

The Court: Yes. [1186]

* * * * *

Mr. Miketta: * * *

Request 66: "That the conversion of a part of a liquefied gas into a solid and a part thereof into a gas by permitting a liquefied gas to expand in a chamber, is a natural, inherent function of the liquefied gas."

Their admission, "(first and third sentences omitted)."

* * * "Plaintiffs are informed that not all gases that may be liquefied may be solidified. * * *" [1187]

* * * * *

Mr. Miketta: May the court please, we find from reading the record that, although Request 53 and the Admission thereto were admitted and introduced in evidence, the Exhibit 9 of that Request which constitutes the license agreement form was not marked into evidence and was not introduced into [1192] evidence. May I offer that exhibit into evidence at this time?

The Court: Yes, I think it was understood that it was to go along, but was not actually taken care of.

Mr. Miketta: May it be marked DD?

The Court: Yes.

[Note: Defendants' Exhibit DD will be found in the Book of Exhibits at page 1413.]

Mr. Foster: At this time, if the court please. I would like to have marked for identification as Defendants' Exhibit EE the prior art patents that have heretofore been filed, and are in the tab book; not all of those patents

being included in the offer, the offer being limited to Cartier, 338,034, tab 1,—

Mr. L. S. Lyon: May this be a little slower?

Mr. Foster: I will withdraw that offer, and first offer and ask to have marked for identification as Defendants' Exhibit FF, this chart, which contains a list of the patents I propose to read. I think it will facilitate the matter for Mr. Lyon.

The Court: You may use that to make this offer.

Mr. Foster: I will give one copy to the court. I have delivered a copy to the defendants' counsel. If it will be of any help to counsel I can give them another copy.

The Court: Do you want to put in each one of these patents separately, under a separate letter, for easy reference?

Mr. Foster: Yes. [1193]

The Court: I think you had better, because you may want to refer to them, not only for the purpose of this proceeding, but on appeal.

Mr. Foster: It would be easier for the court, if I give a letter or number? This is FF.

The Court: That is all right. Just make a notation of what it is, in the record.

Mr. Foster: I offer this as Exhibit EE for identification.

[Note: Defendants' Exhibit EE will be found in the Book of Exhibits at page 1420.]

Cartier	338,034	EE-1;
Sailor	467,783	EE-2;
Holden	530,526	EE-3;
Drummond	533,871	EE-4;
Gaylord	760,191	EE-5;
Holden	876,352	EE-6.

The Court: Let me suggest that you make your number correspond with the number here. It will be EE-1, Cartier; EE-2, Sailor; EE-3, Holden. Follow these same numbers, if you will. Go over this again, so we will have them right.

Mr. Foster: I think down to and including Drummond, EE-4, they are identical.

The Court: Yes.

Mr. Foster: Gaylord 760,191 EE-6, Holden, which is 876,352, will be EE-7; Fleming, which is 955,454, will be EE-8; Julius. 1,018,568, is EE-9; Holden, 1,054,772, EE-10; Osborne, 1,104,920, EE-11; Stastney, 1,288,255, EE-12: [1194]

Slate	1,546,681	EE-15;
Slate	1,546,682	EE-16;
Kochenderfer	1,631,037	EE-17;
Slate	1,643,590	EE-18;
Josephson	1,659,431	EE-19;
Martin	1,659,434	EE-20;
Martin	1,659,435	EE-21;
Voightlander	1,726,373	EE-22;
Martin	1,887,692	EE-24;

British:

Tichborne et al	13,684	EE-26;
Elworthy	7,436	EE-27;
Slate, British	237,681	EE-28;

Haynes, British 263,922, is already in evidence as Defendants' Exhibit M, your Honor; and with the court's permission to list them all, I will give it the list number on the list as No. 31, to avoid any duplication of numbers with the index list.

The Court: Yes.

Mr. Foster: The last patent is Cole and McLaren, patent in suit.

The Court: I think No. 24 was also introduced in evidence as Plaintiffs' Exhibit 21, but it doesn't make any difference, as long as the record shows it is the same patent. It will be convenient to have them in this way.

Mr. Foster: I will hand the original file of these [1195] patents, with the index, to the clerk.

Mr. L. S. Lyon: It isn't clear to me in regard to the Haynes British patent. What number has been assigned to that?

Mr. Foster: 31, for the reason that the index is complete with 30.

Mr. L. S. Lyon: That is Exhibit M, also Exhibit 31?

The Court: No, 28 is Exhibit M.

Mr. Foster: The British Haynes patent, No. 31, I believe, your Honor, is Defendants' Exhibit M.

The Court: Slate takes the 28 number?

Mr. Foster: Yes, the British Slate.

The Court: Heseling was not introduced?

Mr. Foster: No.

The Court: Cole and McLaren 32?

Mr. Foster: Yes. We can mark that 32.

The Court: Mark it 32. That may be received.

Mr. Foster: I think I offered them for identification. I offer them in evidence. They are covered by stipulation.

The Court: They may be received in evidence, and so marked. [1196]

WILLIAM HOWARD CLAPP,

a witness called by and on behalf of the Defendants,
having been first duly sworn, testified as follows:

The Clerk: Please state your name.

A. William Howard Clapp.

Direct Examination

Q. By Mr. Foster: Will you tell us your residence, Professor Clapp?

A. At 95 South Mentor Avenue, Pasadena.

Q. Will you tell the court your experience and education in technical matters?

A. As a young man I served an apprenticeship course with the Penfield Clay Machinery Company at Willoughby, Ohio, as a mechanic. This was one of the pioneer companies manufacturing brick and tile-making machinery, and their plant included a variety of presses, some massive. I did the work of fabricating, erecting and testing of those presses. In 1901 I graduated from the University of Minnesota, in engineering, and my subsequent work led into the design of milling machinery and layout of milling plants and their direction, and in the formation of a company in Salt Lake City, of which I was the designing engineer, in which we manufactured equipment, and designed plants in which I did the designing and supervised the direction and starting of those plants, in Utah, Colorado, Idaho, Montana—

The Court: Flour mills? [1197]

A. No, ore mills. Also in Nevada. I entered the employ of the Throop Polytechnic Institute, during the years 1911 and 1912 as instructor in mechanical engineering. I became a full professor in 1918, and professor emeritus on July of last year.

(Testimony of William Howard Clapp)

Q. By Mr. Foster: The Throop Technical Institute became the California Institute of Technology shortly after you became associated with it in 1912, is that correct?

A. Yes. My work in that connection consisted in teaching courses in machine design, materials and processes, and graduate courses in advanced strength of material.

The Court: S. and R.?

A. I am a member of the American Society of Mechanical Engineers, the American Association of University Professors; American Association for the Advancement of Science; and of the honorary societies of Sigma Psi and Tau Beta Pi; past president of the Los Angeles section of the American Society of Mechanical Engineers; Pasadena Engineering Society, and of the Los Angeles Engineering Council.

Q. By Mr. Foster: Are you the Professor Clapp who with Dr. Donald S. Clark, wrote a textbook on materials and processes?

A. I am. This was brought out about five years ago, and is now in its eighth printing.

Q. Is that a textbook used in colleges, universities, and naval and military schools in the United States?

A. Yes, it has been used at West Point and Annapolis, and [1198] in most of the engineering schools.

Q. In the course of your long experience, Professor, have you had occasion to study and become familiar with the contents of patents? A. I have.

Q. Have you read, and are you familiar with the contents of the patent in suit, 2,025,698?

A. I have.

(Testimony of William Howard Clapp)

Q. Will you refer to that patent, and explain to the court what is there disclosed?

A. This is a patent referring to a gas solidifying apparatus. Referring to Fig. 1—

Q. In that connection, Mr. Clapp, perhaps you can point out upon this enlargement, Fig. 1 of the patent in suit, which is Plaintiffs' Exhibit 8, the elements to which you refer.

A. Referring to Fig. 1, the gas from any suitable source enters the system through the exhaustor 11. There is a storage tank, or gas holder, which is described as the usual inverted bell type. The exhaustor is described as a motor-driven positive type, and there is also a connection from the exhaustor to the compressor 15, in which the gas is compressed to around 1500 pounds per square inch, and enters the system. The entire layout, the tanks, and so forth, is diagrammatic and cursory. There is an oil separator 21, where some of the oil is taken out. There is a water cooled condenser— [119]

The Court: That is, the impurities in the gas?

A. Yes; oil might enter the system through the condenser. There is a compressor system through which gas passes through coils 23 and is cooled in a tank of water or liquid, as the patent states.

Q. By Mr. Foster: 23 or 25?

A. 25. The gas then passes into a tank 30, containing carbonaceous matter, 31, through which it rises. The liquid, I should say; it is supposed to be liquid, and any water condensing being removed at the tap 35, while air, and other non-liquefied gases are collected at 36, and may be let out through the valve 37. From this tank the liquid CO₂ passes down through the pipe 38 or may

(Testimony of William Howard Clapp)

be by-passed through a countercurrent heat exchanger in which the gases are further cooled by outflowing gases from the snow tank.

Q. By the Court: That is an optional arrangement with the operator?

A. That is an optional arrangement with valves shown, not numbered, by which it can be passed either way. And the gases then pass down through an automatic valve 39 and are shown as entering the snow chamber at 51 on either side of the snow chamber.

Q. Is this heat exchanger—

A. It is entirely diagrammatic. It would probably consist in the use of the gas to cool a brine or some liquid of that sort which would flow around, as gas is a very poor [1200] conductor leading to another gas. This automatic valve is shown to be operated through a lever

(97)

mechanism, through the rod 79 which is actuated by a piston.

Mr. Foster: Pardon me, Professor, 79 or 97?

A. 97, which is actuated by a crank, or which is actuated by a connection to the piston 63, which will be described hereafter. The outflowing gases from the tank exit through the pipe 80 and, as shown, they either go into the countercurrent heat exchanger or may go directly to an exhauster which is described as motor-driven, positive type, that is, 11 is so described, and then into a storage tank called an expansion tank, and from there on back to the gas holder or compressor.

Q. Pause there just a moment, Professor. With reference to Fig. 2 of the patent do the gases escaping

(Testimony of William Howard Clapp)

from the snow chamber 50 before they enter the pipe 80 circulate in any manner around?

A. Yes. I was just coming to a description of the snow chamber.

Q. I see.

A. Referring to Fig. 2, the snow chamber is represented by No. 50 and is described on page 1, lines 39 to 40, second column, as having parallel sides and curved ends, as shown in Fig. 3 in plan. It is a double-walled chamber, jacketed, with the inlet to the gases as shown at 51 and shown in sealed communication with the pressing chamber 60. [1201]

There is also a reference, page 2, lines 41 to 44, which I have covered except that there is also shown a geared device for stirring in the chamber or loosening the material so as to help it flow out of the outlet at the bottom into the pressing chamber of 60.

At the right, in Fig. 2 and in Fig. 3, there is shown a closure head 70, described on page 1, lines 52 to 53, second column of the patent, and there is shown also a hydraulic cylinder 71, containing a piston 72, with a piston rod 73 which actuates this head to press it into close engagement with the pressing chamber 60. A description of this hydraulic cylinder is given, page 2, 25 to 29, first column; page 2, 43 to 47, second column.

The ports of this cylinder are connected, as shown in Fig. 1, through pipes 74 and 76 with cylinders 75 and 77 which the patent describes as containing water or glycerine or oil. The upper ends of these cylinders 75 and 77 each have two pipe connections, valve-controlled, one of these connections with the low-pressure system through pipe 91 which goes back to the expansion tank,

(Testimony of William Howard Clapp)

and the other one with the high-pressure carbon dioxide system, through pipe 90 which connects between the compressor and the oil separator. By the actuation of those valves liquid may be caused to flow into cylinder 71 and to actuate the closure head 70 either to bring it into engagement or to remove it from engagement. Likewise on the left of the diagram there is shown a [1202] compressing piston 61 having a rod 64 connecting with a piston 63 in cylinder 62, and this piston is actuated by fluid in entering through pipes 65 or 67 from the chamber 66 and 68 which contain a suitable fluid for making engagement when brought into connection with the outlets, as shown, of each cylinder to the high-pressure side of the gas system or to the low-pressure side of the system.

It will be seen that in the present position the piston 61 is retracted, the connection between the snow chamber and the pressing chamber is unobstructed. References to the pressing cylinder and actuating cylinders are given on page 2, lines 20 to 24, first column; page 2, lines 54 to 57, first column; and for actuation, page 2, lines 20 to 24, the piston being actuated by valve pressure or hydraulically.

References to the inlet on page 2, 25 to 29, where the liquid CO₂ is shown entering by a nozzle, 25 to 29—I beg your pardon. I misspoke.

References to the inlet are on page 1, 39 to 42, second column: "The purified liquefied gas is then led to the chamber 50 into which it is discharged through nozzles 51, its flow being controlled by an automatic valve 39."

And the discharge of the gases is described on page 1, 53 to 55, right-hand column. It says: "The unfrozen

(Testimony of William Howard Clapp)

gas escapes from chamber 50 through orifices 52 into a jacket 53, from which it is led by a pipe 80 to a circulating exhauster 81." [1203]

Some comments might be pertinent here. The exhauster—

Q. You are referring now to Fig. 1, are you?

A. Fig. 1.

Q. Thank you.

A. The exhauster 11 is described as motor-driven, positive type, of which the Root's blower is standard equipment. These run most efficiently at less than five pounds per square inch and seldom exceed that pressure. The gasholder, which is described as the usual inverted bell type, is generally operated at pound or less per square inch, it having a water seal and no great difference in head between the water in the inner and outer tanks, the inner tank which contains the gas usually being counter-balanced. There are no valves in the line 83 between the gas holder and the exhauster 81. I see no possibility of pressures being built up in that system between the high-pressure side of the exhauster and the gas holder, without blowing the seal; so that is a low-pressure connection.

Q. When you say you see no possibility of high-pressure being built up between the gas holder and the exhauster do you mean higher than this one or two pounds to which you referred?

A. Higher than what might be determined by the capacity of the gas holder or by the ability of the gas holder as it is usually run to withstand that pressure.

(Testimony of William Howard Clapp)

Q. Which you understand is one or two pounds per square [1204] inch, is that correct?

A. Yes; usually around a pound, which would mean about the difference in head water of 2.3 feet, say, between the cylinders.

The pressure on the other side of exhaustor 81 must be even lower. There is shown a by-pass by means, whereby by means of a diaphragm valve gas may pass back from the high-pressure to the lower side, depending upon the adjustment of the valve, but from there on to the exhaust, through the outlets 55 into the jacket 53 and from there on out of the jacket into the pipe 80, as shown in Fig. 2, there is necessarily a low-pressure system.

I spoke of the actuation of the closure head and of the pressing plunger.

Q. Professor Clapp, if you will pardon the interruption and before you get to your discussion of the closure head, as I understand your testimony with respect to this showing of Fig. 1 of the patent in suit, it is that in accordance with the teaching of this patent, if the gas holder 12 at the bottom of that diagram is of the usual inverted bell type, as described in the patent, it would be impossible to have a pressure in the line 83 between the gas holder and the exhaustor 81 of more than one or two pounds per square inch, in that neighborhood?

A. That is right; yes.

Q. There has been some testimony in this case with [1205] respect to operations in which carbon dioxide gas was fed back into the snow chamber 50 or a similar snow chamber when the liquid inlet was closed, to build up in there a pressure of the carbon dioxide gas of 40 pounds or 30 pounds or 50 pounds. In view of the disclosure of

(Testimony of William Howard Clapp)

this patent, would it be possible with the apparatus in Fig. 1 to do so? A. No.

Q. By the Court: Let us make it 20 pounds, could you do it?

Q. By Mr. Foster: Could you do it with 20 pounds? Could you build up a pressure in the snow chamber of 20 pounds by opening the line 83 and other connections back to that snow chamber 50?

A. Well, it would depend upon the length of those lines and the diameter of the pipe and the amount of friction that was generated, that creates the pressure.

Q. Understand my question is this, Professor: With your head of pressure in the chamber 50 down to atmospheric pressure, is it possible, or what is the maximum pressure that you could develop in that chamber 50 from the return of carbon dioxide gas from the gas holder 12 and back through the line 83 into the snow chamber?

A. As I understand the question, with the inlet valve closed?

Q. With the inlet valve closed.

A. It might be a couple of pounds. [1206]

Mr. Foster: Is the description clear, your Honor? Are there any questions on that? The Professor was turning to a description of another part now. Perhaps I can ask a question there that would clarify it somewhat for the record.

Q. As I understood your testimony, Professor, this line, this gas line 80 which is the CO₂ gas line between the snow chamber 50 and the remainder of the system, connects to the exhauster 81 so that the pressure in it on the snow tank side of the exhauster 81 is less than the pressure on the exhaust side of that exhauster 81?

A. That is right; yes.

(Testimony of William Howard Clapp)

Q. And the maximum pressure on the exhaust side of the exhauster 81 must be no more than a pound or two if the gas holder 12 connected thereto is as described in the patent, of the usual inverted bell type?

A. Yes.

Q. And that that situation would not permit the pressure in that line 80 of gas being returned to the chamber 50, with the chamber 50 at atmospheric pressure, to exceed more than a pound or two per square inch?

A. No.

Q. And that situation is not altered by this by-pass through the diaphragm valve 84, since the maximum pressure which can communicate is the pressure in the line 83, which is again controlled by this gas holder 12, is that correct?

A. That is right. This diaphragm valve would be [1207] adjusted to operate for a difference in pressures on the two sides. At most it could only return a pressure to that on the high side.

Q. Which is controlled by the pressure in the line 83 and gas holder 12, is that correct?

A. That is correct.

Mr. Foster: Did the court have any questions on that point?

The Witness: I spoke of—

Mr. Foster: Just a moment, Professor Clapp. Perhaps the court has a question. If the testimony is not perfectly clear to your Honor, perhaps by reference to the enlargement, Professor Clapp might be of assistance to the court in explaining that situation.

Q. By the Court: Where on that No. 1 is the original inlet of your material, your CO₂?

(Testimony of William Howard Clapp)

Mr. Foster: May I approach your Honor?

A. To the exhauster 11.

The Court: Yes. When this excess material comes back through the exhauster 81, feeds down through 83 into the gas holder, the pressure here has got to be relatively the same or a little less than the pressure here, hasn't it?

A. Yes.

Q. In order to make it run in there?

A. Yes, sir.

Q. Now, if it comes out of the gas holder and goes up [1208] here into the compressor and goes back into the system—

A. Then we are told it is compressed to 1500 pounds per square inch and exists through pipe 16 back to the system again.

Q. Isn't there some way by that process to get that in such a way as to increase the pressure in the chamber?

A. The inlet valve is on the high-pressure side of the system.

Q. That is right.

A. The exhaust valve is on the low-pressure side of the system.

Q. That is right.

A. There is no connection between those two sets of pipes, and the return is—

Q. I see. There is nothing indicated in the patent to accomplish that, is your point?

A. Yes, sir; there is nothing indicated.

Q. You would not have much trouble in doing it, would you?

A. No; but I don't see that the patent discloses any intention to do it.

(Testimony of William Howard Clapp)

The Court: That is my point.

The Witness: Yes.

Q. By Mr. Foster: You were commencing to describe the construction and operation of the plunger, I think, Professor Clapp, when I interrupted you.

A. I would refer to the dotted lines, first, in cylinders [1209] 66 and 68, which represent the liquid level as it should exist when the pressing plunger or the actuating plunger 63 has been moved to left-hand position and fluid is down in tank 68 under the high-pressure gas connection and its level in tank 66, when the liquid back of the actuating piston has been forced out into the tank 66 and gas has been caused to pass out into the low-pressure line. That is as it should be for operation.

Now, turning to 75 and—

Q. By the Court: For the initiation of the operation?

A. For the initiation of the operation of this actuating piston and the ram.

Q. Yes.

A. Turning to the other side, we find that liquid has gone down in tank 75 and up in tank 77, but the actuating head is shown in its right-hand position. There is no way in which it could be brought to closure without letting high-pressure gas into this system through pipe 74 and blowing the liquid out through pipe 76 and cylinder 77 into the high-pressure side—no; into the low-pressure side of the system.

The Court: The low-pressure side.

A. But that is not the worst of it. We refer to this actuating level which operates the valve 39. As shown in this position the valve is open. It will be closed when the ram 61 advances to close the chamber and contact

(Testimony of William Howard Clapp)

is made between 94 and the other end of the bell crank lever 92 to [1210] throw the lever on valve 39 up so that liquid CO₂ is entering the system here and is passing out through the mouth of the open end of the cylinder 60.

Q. By Mr. Foster: Do I understand that, as the apparatus is illustrated in Fig. 1, it is not operative to produce compressed blocks of solid CO₂. Professor Clapp?

Mr. L. S. Lyon: I object to that as no foundation laid, your Honor.

Mr. Foster: He has just been testifying to it.

The Court: That seems to be the point of what he has just said.

Q. In your judgment, the hook-up won't work, is that right?

A. In my judgment, with the arrangement of liquid in cylinders 75 and 77 and of the plunger in cylinder 71, the hook-up will not work. Liquid carbon dioxide is certainly blowing out through the opening in the bottom of the snow chamber and out through the outlet of pressing chamber 60.

Q. If nothing happened to it from the time it came in, it would follow the line of least resistance and go to the atmospheric outlet, wouldn't it? A. That is true.

Q. Suppose that it started solidifying, then it would not go out, would it? Suppose the liquid comes in from the nozzle and it is diffused and then it solidifies, it would not be flowing out there very long because it would block [1211] itself automatically, wouldn't it?

A. Well, that is a pretty big opening in that hole of the open end of cylinder 60 and the snow chamber, and we understand that this is liquid carbon dioxide which must come in.

(Testimony of William Howard Clapp)

Q. Suppose that you just move that up closer to the closure there, wouldn't that do it?

A. Yes; that would do it. To do that there—

Q. What is that number, No. 70?

A. Yes; 70 is shown open and there has been an error in the dotted lines in cylinders 75 and 77 evidently.

Q. Yes. You could not make that contact unless you reversed this? A. No.

Q. But that is just a detail, isn't it?

A. Yes; I think that is a detail, but I think that showing this valve in open position and the cap away from the closure is—well, I said it was cursory; it is a little diagrammatically out.

Q. Of course, I have to understand this Doctor. I am not so much interested in this Figure, because, while I did not understand at the time and was going to ask you later what you meant by "cursory", I assumed that you meant that it was what we would say as laymen "casual"; that it was not supposed to be accurate or to show the various positions of the apparatus at various times? [1212]

A. Well, I meant superficial and, perhaps, a hint of carelessness.

Q. Now, what about the words as distinct from the diagram?

A. Yes; the word discloses carbon dioxide enters the snow chamber; that it is expanded and that the snow drops into the cylinder 60; that it is compressed against the closure head 70.

Q. The same meaning as the words indicate?

A. Yes.

The Court: Very well.

(Testimony of William Howard Clapp)

Q. By Mr. Foster: With reference to this chart, Exhibit FF, will you state to the court what you had to do with its preparation?

A. Mr. Foster gave me the Cole patent, asked me to read it. He gave me the elements that are indicated by the letters A to G2 on the chart and the patents that are shown here, and asked me to read them and to prepare a list where I found corresponding elements to those given in the Cole patent or to any of these headings.

Q. Is this chart, Exhibit FF, prepared in its final form under your direction?

A. Yes. I made it in pencil form and it was inked and photographed under my direction.

Q. You may refer to that if you wish in answering this next question. Would you just briefly summarize the elements [1213] that you found in this Cole and McLaren patent in suit?

Mr. L. S. Lyon: I object to that as too general, your Honor.

The Court: Yes; I think it is a little general. Let us give the doctor a little rest. He has been at this for some time now. Take a little smoke.

(Short recess.) [1214]

Q. Professor, will you now direct your attention to the patent to Cartier, granted in 1886, Defendants' Exhibit EE-1, and point out to the court what is there disclosed?

A. The Cartier patent shows an oil press consisting of a pressing cylinder, described—there is just one page, at lines 27 to 30; cylinder B, covered with a lid or closure head D, described on lines 27 to 30, actuated by a screw mechanism V in Fig. 1, and similar closure heads and screw mechanisms V' and D' are shown in the right-

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hand drawing. The left-hand closure head comes down in contact with the open end of the cylinder B. There are provided perforated plates marked E, and a suitable filter cloth marked F, so that liquid may percolate out through the openings and pass down, as shown, through a hole connected to a spout at the bottom of cylinder B; that is, to the bottom A, which in Figure 1 is shown to be bolted to cylinder B.

There is described a pressing plunger, which is similarly covered with a perforated plate, and with filter cloth, so that the plunger leaks and oil may be passed out through the bottom of this plunger, as described, the reference to the plunger being on page 1, lines 17 to 26.

Means for moving the plunger, lines 37 to 43, in which we are told that a hand press, embodying this invention, and the plunger D', at the top of the vessel, are actuated [1215] by the screw V, or equivalent; that is, a cap; the bottom capable of being raised by a rack-and-pinion arrangement. This description is contained in lines 34 to 40. Also it is stated:

"The construction is otherwise substantially the same as that of the hydraulic press, and will be understood from the foregoing description."

Equivalent means are given for operating the plunger.

Q. What is your understanding of the means referred to by that term, Professor, for actuating the lid and plunger?

A. Equivalent means are any mechanical means for accomplishing the same object. The plunger or the head might be actuated by fluid cylinders, using liquid, gases, or steam; it might be operated by a crank and rod mechanism, or by an eccentric, or through a rotating

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shaft and a toggle device. Any means for causing the piston to move in its path and exert the desirable pressure, or equivalent.

Q. In the left-hand view of the pressing plunger, which I believe is C, does the patent state whether or not that is operated hydraulically?

A. Yes; lines 34 to 36.

Q. I call your attention to lines 18 to 20.

A. That is the rod of a piston or hydraulic ram. That is not entered up on my diagram.

To summarize, there is disclosed a chamber or mold, [1216] closure head, means for opening the chamber on the outside, an outlet for fluid, either through the cap D or through the piston, or the ram C; a pressing plunger, a means for moving the plunger, one of them being through a pressure means.

Q. What is your understanding of the manner in which the compressed material is removed from the chamber B in accordance with the patent of 1886?

A. Material is removed by raising the cap and moving the piston to eject the material from the top of the cylinder.

Q. Had you completed your answer?

A. I have.

Q. I will next direct your attention to the Sailor patent, issued in 1892, Defendants' Exhibit EE-2, and ask you to explain to the court what is disclosed. [1217]

* * * * *

A. Sailor describes a cotton press, containing a pressing box, open at each end, marked X.

The Court: May I interrupt you to say this: It doesn't seem to me that it makes very much difference, so

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far as we are concerned here, with the method by which these pistons are actuated. That can be done in any number of ways; it can be done manually; it can be done by hydraulic pressure; it can be done by liquid pressure; it can be done by all sorts of different ways; so, unless there is some particular point in it, all you need to say is that the pressure is mechanically applied in such and such a way, as described in the patent, and unless some one wants to have it more clarified, or if there is any particular point in the means by which this pressure is applied, he may so state.

Mr. Foster: Only these claims 4 and 34 relied upon specify particularly that the means for operating the closure head are fluid pressure operated, and claim 33 relied upon specifies that the pressing plunger is operated hydraulically. The other mechanical combination claims just recite means, and they are, as indicated, any means. But these three claims specify hydraulic means in particular. That is the reason why our outline heading was: Fluid pressure operated means for the press, because three of the claims do specify that particularly. However, I am content that [1219] he do not testify in detail to the fluid content. Probably the witness can say it is hydraulically operated, or not.

A. This vertical box or cylinder marked X is shown in Figure 1 as containing the cotton. It is referred to on page 1, lines 25 to 30. There is the top closure, marked D in Figure 2. That is also shown in Figure 1, in its raised position, and is described on page 1, lines 40 to 44. Means for actuating the closure, fluid means, page 1, 46 to 49, and 59 to 62. There is a pressing plunger, similarly actuated, and described on page 1, lines

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25 to 30, 43 to 45, with a plunger, 46 to 49, 62 to 71, page 1, for actuating means.

The Court: Professor, I think maybe we can save you a lot of trouble about your references to express the wording of the patent, in so far as they are indicated on the chart, all you need to do is say "as indicated in the patent." If I don't understand it, I will read this. I will have to look at it anyway. So, without reference to what the patent says, it will be assumed you are describing what the patent discloses, if you just describe the apparatus. I can follow it as you do that, without reference to these pages, because if I am specially interested in anything, or in doubt about anything, or don't understand about anything, I will read the description in the patent or ask you. Is that satisfactory? [1220]

Mr. Foster: Very, your Honor. That is the prime purpose of the chart.

A. In operation the cotton is charged in at the top, and can be pressed down by the upper closure or piston, and when a sufficient amount has been accumulated the lower piston, which is actuated by a somewhat more powerful cylinder, is caused to raise, and the final compression is brought against the closure head R, as shown in Figure 2.

The Court: Is there any provision provided for any moisture or liquid?

A. Bale bands are provided in both the upper and lower rams, and this would make means for the gas to escape as the cotton is compressed.

The Court: What do you mean by bale bands?

A. For tying the band. It is necessary, so we get a cord or string around the bale while it is still being pressed.

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Q. By Mr. Foster: Are those the recesses shown, the cut-away notches in the plunger and head N and D in the drawing?

A. They are. To summarize, there is disclosed a chamber or mold, closure head, a fluid pressure closure, drive plunger that leaks, and a fluid pressure operation of the plunger.

Q. I wish to call your attention to one thing, and I think I can do it more quickly by reading from the patent. [1221] Page 1, line 50.

"As any suitable arrangement of valves, pipes, pumps, & 3., may be employed to conduct the fluid to the cylinders I have not deemed it necessary to show and describe them in this specification."

And the statement, page 1, line 100:

"for instance, any other suitable mechanism * * * may be employed to operate the platens."

as supporting the statement made a moment ago that all these means, as well as hydraulic means, are well known.

Professor Clapp, please direct your attention to the Holden patent, 530,526, issued in 1894, Defendants' Exhibit EE-3, and briefly describe what is there disclosed.

A. This patent describes a method of pressing chips of ice to form solid blocks. There is a freezing chamber through which water enters at the bottom through the pipe E, and is refrigerated by suitable coils, as shown, the ice rising to the top, and dropping down over the edge of the pipe D into the hopper K of a horizontally disposed cylinder.

There is a closure head of sorts shown at O, actuated by springs P, by means of which pressure may be put upon

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the ice as it is being pressed. I note by measuring that these lids are capable of folding up and covering the opening, but I do not think that was the intention of the patent. The ice is then forced out against the stop R. [1222] There is a piston shown at the left of the cylinder. The piston has holes in it through which any water may pass out to the rear and be caught in a suitable manner.

The Court: These flanges on that closure, if you closed them way down, it wouldn't do you any good; there wouldn't be anything to hold against, would there? They are designed to be screwed down against something that is tangible?

A. I think they are designed to screw down against each other to make a V-shaped closure to start the compression of the ice.

The Court: Against each other?

A. Yes, although they are of such length that they can cover the openings if the springs were adapted to hold up.

Q. By Mr. Foster: Is it the teaching of the patent that these closures O and the block R will be used as a head against which to compress the block of ice that is being compressed by the plunger I?

A. Yes. There is also shown a gate valve or closure L at the bottom of the ice-forming chamber, by which an accumulation of material may be made, and may be dropped down into the hopper in front of the pressing plunger.

To summarize, there is shown a chamber or mold, closure head, and supply or inlet through the water, fluid, so water and ice may pass into the hopper; an outlet for

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the fluid or any gas, a plunger that leaks, and means for operating [1223] the plunger.

Q. Professor Clapp, is the purpose of the apparatus as illustrated and described in this patent to continue the accumulation of solidified matter in the chamber D without interrupting it for the pressing operation that is performed in the pressing chamber H?

A. Yes, if the gate L is closed we may continue to accumulate there until the cylinder D is full.

Q. I wish to call your attention to the statement on page 1, line 77:

"The piston I receives motion from a crank and connecting rod or by a screw or any other suitable power, so that the piston rod gives motion to the piston I and carries the ice crystals or chips along within the solidifying trunk H and applies the necessary pressure to cause the particles of ice to adhere together."

The variety of the actuating means is the point of my reading that portion.

Q. Professor Clapp, will you now direct your attention to another Holden patent, 876,352, issued in 1908, which is Defendants' Exhibit EE-7? I will take that up, if the court please, a little out of order, because it is of the same patentee.

A. There are shown here views in side elevation, and in plan. Figs. 1 and 2, of another ice pressing or gas solidifying device, in which the actuating piston is [1224] placed in the middle of a tandem arrangement at 2, and there are two cylinders, 3 and 4, at either end, in which the ice is pressed. There are actuating rams in the cylinders marked 18 and 19, and their outline is shown in dotted lines.

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Q. In which figure?

A. In Figure 1. Each of these cylinders is open at the end, but have closure gates marked 13 and 14, which are of wedge-shaped form, and are arranged to slide within guides, so that when the gate is down it closes the opening and seals the end of the cylinder. These gates are shown to be actuated hydraulically through cylinders 26 and 27.

In the right-hand view gate 13 is shown to be raised. Piston 18 has injected the ice block. Piston 19 has moved over to the right-hand end of the cylinder, both rams being actuated by the actuating ram in cylinder 2. There are inlet valves to the cylinder through which the ice chips may flow, these valves being marked 22 and 23. Valve 23 is open for the entrance of ice, which comes down to pipe 26 and enters at the bottom of the cylinder. A provision is made for the water and any entrained air, as the patent says, to escape through pipes 52 and 53 respectively, at the top of the cylinder.

The Court: A kind of tandem arrangement?

A. It is a tandem arrangement, with operating means at the middle. There is a closed head and chamber mold, [1225] a closure lid, fluid means for operating the closure lid, a supply or inlet for ice and fluid, an outlet for fluid or any gas, a pressing plunger, a fluid pressure means for operating the plunger.

Q. You have described the particular form of these closure gates, indicated as 13 and 14, as described in detail in the patent, as being rather triangular gates or closure members. What is their use or purpose?

A. I said they were of wedge-shaped construction. They are shown in Figure 2 in plan, as being enveloped

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by a portion of the cylinder at either end so as to make guides of similar contours upon which they slide.

Q. In your experience when such gates or closure members are employed, of that form, do they provide a good seal? A. Yes.

Q. I refer to the patent which expressly states there is an outlet for the air, to the statement on page 2, line 43:

“The presses 3, 4, have perforated linings, for which I was granted Patent 730,018, June 2, 1903, the upper and side perforations in connection with the pipes 52, 53, will remove any air carried into the presses with the ice particles,”

A. That is correct.

“and the lower perforations permit the escape of any water, so that the ice block is perfectly pellucid.” [1226]

I notice another patent of Holden. Did the court have any questions on this patent?

There is a word I never saw before—“pellucid.”

A. Originally it meant translucent. It now means transparent.

Mr. Foster: Why the patent didn't say so, I don't know.

Q. I direct your attention to Holden patent 1,054,772, which is Defendants' Exhibit EE-10. Will you point out what is there described?

A. This is a very similar device. The arrangement here consists of two actuating cylinders, and two pressing chambers, as shown in Figure 1, so that it is a duplex rather than tandem arrangement. The sectional view in Figure 2 shows much more clearly the arrangement.

There is shown a pressing chamber for ice blocks 22, and a ram 29, actuated through the rod 28 by the piston

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27, in the hydraulic cylinder 21. Fluid enters at the bottom through the opening shown in Figure 2.

Q. That is the opening directly underneath the plunger 29?

A. The opening directly underneath the plunger; and escapes in a manner similar to that described in the last patent, around the walls of the chamber through a grid, and out at the opening 57 in the top of the chamber.

The closure head is perhaps a little more clearly shown [1227] in this view, which is a section through the middle. The grids being shown partly dotted, and connected with the operating fluid controlling means, being clearly shown, both the closures, head and ram, are actuated by hand control through levers, as indicated at the right of Figure 2, so that it is possible to gauge by pressure when the chamber has been filled, as the piston has been moved to the right, to actuate the piston, and later the closure head, as desired for compressing the block and ejecting the block. There is a long detailed description of the valve mechanism, but the previous patent says it may be any well-known device, and a description hardly seems necessary.

To summarize, there is disclosed a chamber or mold, closure head, means for opening the chamber, supply or inlet, outlet for gas and water, pressing plunger, and fluid pressure means for operating both plunger and head. [1228]

Mr. Foster: I might state to the court that one of the reasons we included the later Holden patents was because the first one did not show a closure head as completely as did the later patents, and we wanted a complete picture to be before the court.

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The Witness: I should state that the first patent, I have taken the closure head as making a sealed connection, because all it discloses is this wedge-shaped construction.

Q. Now you are referring to what patent?

A. I am referring to Holden 876,352.

Q. Yes.

A. But the second Holden maybe does show a means for letting any water which might get behind the piston be let out as shown—

Q. Now you are referring to Holden 1,054,772?

A. Right; as shown in Fig. 11.

Q. Would you just point out what is there disclosed?

A. There is there disclosed a side view of the wedge-shaped gate, partly in section, showing a recess 81 covered by perforated plate 82 by means of which any water which gets behind the piston may be caused to flow out over the top of the gate and carried away from the system.

Q. Will you now turn back in your list of art to patent No. 533,871, issued in 1895 to Drummond, which
(EE)

is Exhibit FF-4, and point out to the court what is there disclosed? [1229]

A. This is a press for pressing out the juice from cane. The cane is cut up into small pieces and charged into the chamber or crushing vessel A. Steam may be admitted to the chamber from a pipe L for the purpose of making extraction of the juices more readily accomplished. There is a closure head E which is really actuated by two cylinders, one, the top cylinder, through the small rod D, may compress the cane, actuated by steam or air, compress the cane and press it down into the cylinder. For pressing out the juice there is a surrounding cylinder C¹, or

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surrounding piston C¹ in cylinder C which is operated by fluid means and which presses down against the head E and permits a considerable pressure to be put on the cane. After the juices have been extracted, the piston head E or closure head E is raised, the materials raised out through a piston F at the bottom of the cylinder, actuated by the fluid means through cylinder F², and a piston rod F¹. While the cylinders, as shown, represent the pressing as taking place through the actuation of piston E, it is just a question of the size of actuating cylinders employed. The same method of pressing might be made against E as a head, after which the material could be ejected.

Q. Is the outlet at C disclosed as withdrawing under a suction the liquid and gases which are introduced?

A. Yes. References are given in the chart which show the outlet of gases to some form of extraction device through [1230] openings at C in the bottom of the chamber.

To summarize, there is disclosed chamber or mold, closure lid, fluid pressure means for operating the closure lid, a supply or inlet for steam, an outlet for liquid and vapor, pressing plunger, and fluid pressure means for actuating the plunger.

Mr. Foster: Were there any questions on this patent that the court had?

Q. By the Court: This rod d with the piston head E, in its original operation is just a tamp, isn't it?

A. It is just a tamp, yes; and then the other cylinder—

Q. Then they put the hydraulic pressure on it and they give it the works?

A. That is it.

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Q. By Mr. Foster: Would you next direct your attention to the patent to Gaylord, 760,191, issued in 1904, Defendants' EE-6, and point out what is there disclosed?

A. Gaylord discloses a method of pressing powdered amber into molds for the purpose of making articles such as the pipe stem which is illustrated here in Fig. 2 and Fig. 3. The chamber consists of two parts, one at the right in Figs. 2 and 3, which contain the powdered amber which is heated to a suitable temperature and then pressed out into a mold of correct shape, as shown in the left-hand figure, and while under pressure formed into the article desired.

Considerable description is gone into in connection with [1231] these molds, with emphasis upon making them perfectly tight and easily taken apart. For example, the mold in which the greater part of the stem of the pipe is made is made into two parts, marked 7 and 8 in Fig. 3, with connection on a longitudinal plane, all fitted very nicely. There is another part of the mold there which is shown and a closure head marked 13.

Q. That is to the left, to the extreme left of the figure?

A. At the extreme left, which head is described in the patent as being able to make a complete seal, or to be withdrawn slightly so as to allow gases to escape, the purpose being that in one case, when it is a complete seal, they get cloudy amber, and when it is withdrawn and the gas is allowed to escape, they get clearer amber.

There is a piston 4 with a very closely-fitting disc 3 in front of it by which, by some means, pressure may be put upon the amber and force it into the left-hand part of the chamber, the mold.

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And, summarizing, there is described a combined chamber and pressing mold, a closure lid or head which can be operated by some means, manual, perhaps, an outlet for gas when the closure head is slightly withdrawn, a pressing plunger and some means for actuating the plunger.

The Court: I think I saw this machine in operation in one of the manufacturing establishments in the east when we [1232] used to buy ambroid. I think it is exactly this machine.

I think we had better take our midday recess.

Mr. Foster: May I have the court's indulgence for one moment? We have had this model here in court for several days, waiting until we should put on our experts. If the plaintiffs are willing to stipulate that solid carbon dioxide ice, triple point ice can be produced in it and taken from it, we do not need to ask the court for the privilege of making a demonstration in the courtroom. The demonstration requires two tanks. If they are not willing to stipulate, we wish to ask the court if it would be permitted that we have two tanks, your Honor?

Mr. L. S. Lyon: May I ask what this is supposed to be a model of?

Mr. Foster: Yes. It is a model—

The Court: Suppose you talk it over among yourselves after recess and see what you can accomplish.

Mr. Foster: Would the court have any objection, if we cannot reach a stipulation, to our bringing in two of the tanks?

The Court: No; I have no objection.

(Whereupon a recess was taken until 2:00 o'clock p. m. of the same day.) [1233]

AFTERNOON SESSION

2:00 O'CLOCK.

The Court: You may proceed.

Mr. Foster: With the court's indulgence, the stipulation sought by defendants from the plaintiffs was declined by the plaintiffs, and we think it would be of interest to the court to observe the making of some solid carbon dioxide in the model which has been in the courtroom for several days and which the later testimony will tie into the prior art. It will take only a very few minutes, and we have Mr. Wilson here, who is an employee of the defendant, and Mr. Wilson, if it is agreeable to the court, will conduct the operation.

I wish to explain to the court that, of course, this model is not a commercial device, but, like commercial devices, it must reach the proper temperature before the most perfect results are obtained, and this machine has been operated only a very few minutes and is not anywhere near the temperature at which commercial devices would be, that is, the metal walls and so on. And, as I say, it is not a commercial device, but we think it will illustrate our point to the court. If the court is agreeable, when Mr. Wilson conducts the operations, may I, with someone from the plaintiffs checking me, give to the reporter observations of lengths of times and the pressures so that the record may [1234] show?

The Court: Very well.

Mr. Foster: Mr. Wilson, will you come forward, and if the plaintiffs or their experts would like to look?

Mr. L. S. Lyon: I do not understand the statements made about the temperature. This is supposed to be a soap-making device and you flow in hot soap into it, hot soap material. I don't know what the statement was.

whether it has not been heated up enough or what happened to it.

Mr. Foster: The statement, Mr. Lyon, was that, unlike the commercial operations of the defendant, the machine had not reached that low temperature at which it operated most efficiently. Mr. Lyon has referred to the Stastney patent and that patent teaches that cool air may be introduced in the two lower pipes of the model, which is the central device, which exerted a cooling effect upon the inner concentric chamber. We have not circulated the cooling air, Mr. Lyon, around that inner chamber.

Would you point out, Mr. Wilson, so that plaintiffs' counsel and experts may see? We place a small cake of ice in here, your Honor.

Mr. Morris: May Dr. Jones come in and observe it?

The Court: He may. I am going to go down there so that I can see it.

Mr. Foster: We had for the last very few minutes a cake of CO₂ ice near the inner concentric chamber in an attempt to [1235] reduce that temperature. And if you would remove that? And the plaintiffs' experts are invited to inspect it to see that there is no solid carbon dioxide in the device now.

There is in the bottom of the inner chamber, your Honor, as the evidence will show, a small piston. That is the bottom wall that you look at now as you peer into it.

Mr. Jones: Do you want to show the piston removed?

Mr. Foster: We will remove the piston. I thought we would make the block and then we will.

Mr. Wilson, will you proceed to put the top on that device?

May the record show he is placing a sheet of rubber on top of the two concentric cylinders and then placing a

head plate on top of the rubber plate and securing it in place with four bolts.

We did not take the time to have this photographed, your Honor, and I think possibly your Honor can indicate if he wishes it, and it might be well at the completion of the tests for one of the representatives of the plaintiffs and the defendant company to have it photographed so the record may show it.

The pressure gauge communicates with the inner of the two concentric cylinders and will indicate the pressure therein. The tank which is on the upright stand is the tank of liquid carbon dioxide with some gas in it and it is connected through the copper tubing to the device. The two pipes near the bottom which exhaust into the atmosphere are [1236] merely connected to the space between the two concentric cylinders.

If you wish to time this, Mr. Jones, I have a stop watch here.

Mr. Jones: That is all right; go ahead with it.

Mr. Foster: Whenever you are ready to start the liquid carbon dioxide inlet into the device, let me know.

The pressure has risen to a little in excess of 60 pounds. It fluctuates somewhat, but is being maintained.

Mr. Jones: Can't we position that so that the court and myself can see that gauge without standing between the wall and this affair here?

Mr. Foster: I think if you will come over here, Dr. Jones?

Mr. Jones: I don't know whether I am that enthusiastic or not. It will help some, anyway.

Mr. Foster: It is 30 seconds, Mr. Wilson. The pressure drops there for a few seconds and fluctuates and then raises. At one minute, Mr. Wilson, the pressure for the last few seconds has been at about 75 or 70.

Since the last observation the gauge has remained at about 70 to 75. It is now a minute and 35 seconds, Mr. Wilson. One minute and 45 seconds. Fifty seconds; fifty-five seconds; it is two minutes, Mr. Wilson.

Mr. Wilson has shut off the liquid inlet valve at two-minute interval and the pressure on the gauge on the device [1237] remaining at between 70 to 75 pounds since the last observation of the pressure.

Do you agree that is right, Dr. Jones?

Mr. Jones: To the time the valve was closed.

Mr. Foster: Yes. Then it diminished and it is now falling.

Mr. Jones: It dropped to 60 pounds and remained at 60 pounds for a period of about 30 seconds.

The Court: After the valve was closed at first.

Mr. Jones: After the valve was closed.

Mr. Foster: Would you proceed now, Mr. Wilson? Mr. Wilson is now connecting the inlet at the bottom of the model to a tank of CO₂ gas, and now opens the valve in the CO₂ gas connected to the model.

Mr. Jones: May the record show that Mr. Wilson was compelled to disconnect the cylinder in order to relieve the pressure beneath the piston and that the release of gas through the block formed continued throughout the pressing operation, so that some gas was conducted through the block being formed while the pressing operation was conducted?

Mr. Foster: I do not believe that is correct in all respects. I think that the pressing operation was initiated and after perceptible interval after the carbon dioxide gas was introduced at the bottom of the model, there was a sudden outrush of the gas from the valve pipe connected below the dial; and there was a little interval there, I think, and [1238] that outrush of gas continued while the

pressure indicated by the gauge dropped down again to atmospheric.

Mr. Jones: I think the record shows both comments, and also should show that the gauge showed rather violent fluctuation indicating a release of gas in considerable pressure, varying from zero to greater than 150 pounds during the pressing operation.

Mr. Foster: I think probably what happened upon observing that flow of gas is that the piston, which we found shortly before the noon recess had become somewhat corroded in that cylinder during the days it was standing here, and permitted gas to escape therepast.

Mr. Jones: This operation is not complete yet.

Mr. Foster: No. Mr. Wilson is now removing the bolts from the top of the device, the model, and removing the top plate.

Mr. Jones: It blew out.

Mr. L. S. Lyon: Your Honor is following what they have to do to get this product out of this tank?

Mr. Foster: The rush of gas past the piston prevented from getting a cake of substantial proportions, and I think the temperature, the high temperature of the device contributed to it.

Mr. Jones: I do not think there is any objection or intention to prevent you giving a nice demonstration. What is the objection to taking the bottom plunger off, starting [1239] all over again, and making a good cake?

Mr. Foster: All right; let us do that. Can you take off the bottom connection, Mr. Wilson, so we can remove the piston and show the piston?

Mr. Miketta: May we ask Mr. Wilson whether there is enough liquid in the tank?

Mr. Wilson: I wouldn't think so, sir.

Mr. Foster: I think we have some more liquid, your Honor.

Mr. L. S. Lyon: What are they doing now? Does the record show?

Mr. Foster: Taking the connection off the bottom.

Mr. Jones: He is going to take the piston out bodily and make a fresh start.

Mr. L. S. Lyon: Would you have to do that in operating the device? Do you have to take it apart to remove the piston?

Mr. Jones: I really couldn't say. I was only suggesting that they get a clean start and make a good block.

Mr. L. S. Lyon: Is it intended that the record should show that there was a block made by this demonstration?

Mr. Foster: No; it is not intended that it should show a complete block. There was some solid carbon dioxide, but we did not produce in the first operation a block shaped as is the center cylinder.

I may state, in attempting to cool the device here in the last few minutes in the courtroom, that these were [1240] produced, and then the device apparently has warmed up somewhat (indicating samples of product).

Mr. Jones: I would like the record to show that the cold chamber is commencing now to formulate water frost on its inner surface from its normal condensation from the air of the room.

Mr. Foster: If the court please, the zero point on the gauge is out of order, so the needle does not register on the zero point, and rather than conduct the second test, as suggested by Dr. Jones, while the gauge is not accurately indicating the pressure, I ask to make the demonstration at a later time.

The Court: Very well.

Mr. Foster: Professor Clapp, will you resume the stand? I might state, because I think the court will be interested, and I neglected to do so, that the Cartier patent, No. 1 of Defendants' Exhibit EE, was not a file wrapper reference cited by the Patent Office in the prosecution of the application, nor was the Sailor patent 467,783. The first Holden patent was. That was the one that did not have the closure gates on the compressing chamber, but Holden patent No. 10 was not, nor was the Holden patent, which is No. 7, and the Drummond patent, which Professor Clapp has discussed, was not a file wrapper reference; nor was the Gaylord patent. Only one of them, the first Holden patent, was a file wrapper reference. [1241]

WILLIAM HOWARD CLAPP,

resumed.

Direct Examination

continued.

Q. By Mr. Foster: Professor Clapp, will you turn next to patent 955,454, issued in 1910 to Flemming, and, inasmuch as the patent to Julius, 1,018,568, issued in 1912, appears to be very similar, would you consider them together, and point out to the court what is there disclosed? They have the numbers 8 and 9 on Defendants' Exhibit EE. Neither one of these patents was a file wrapper reference, may it please the court.

A. These patents are devices or machines for making little sticks of carbon dioxide snow, little pencils of snow, and each consists of a cylinder.

In the Flemming patent, 955,454, which I will describe, it is represented by a. This cylinder has a number of holes in it, represented by a'. Surrounding the cylinder

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is a jacket member of some porous material, through which, the patent states, the gas may escape slowly, so that when this cylinder is screwed onto the outlet of the carbon dioxide tank, with the connection b, screwing onto the connection d', the outlet of the tank f, there is a complete closure made. There is a piston within this cylinder. The piston is marked d', and a rod attached to the piston running back to a handle d³, which permits it being pushed back and forward and set in a position, as, for instance, indicated by the dotted lines midway along the piston. It will be noted that [1242] the piston has a conical recess in it. The operation consists in withdrawing the piston to some point, as that one indicated by the dotted lines, opening the cock on the cylinder f, permitting the carbonic acid gas, or liquid carbonic acid, or carbon dioxide, to flow into the cylinder, and to expand so that the snow forms in the cylinder. The screw c' may then be loosened, and the stick of snow pushed back against the closed head of the outlet of the cylinder, and this may be repeated several times, until we obtain a fairly compressed stick of snow of a desirable length. The closure of the valve on the cylinder makes a seat against which the snow is compressed.

There is then indicated a chamber or mold, a closure lid or head, means for opening the chamber by unscrewing the device from this connection with the tank, a supply or inlet for carbon dioxide gas, an outlet for gas, a pressing plunger, and means for moving the plunger.

Q. Would you refer now to Julius, No. 1,018,568?

A. The Julius device is very similar, and the number of holes in the wall of the cylinder, with the jacket removed, is indicated in Fig. 1. Instead of pressing the

(Testimony of William Howard Clapp)

plunger back by hand, there is a screw device shown,—two, in fact; one in Fig. 2, and another one in Fig. 7, of a little different type, for compressing the snow against the head of the valve in the tank. There is also shown a quick attachment device, represented by 19—19 is part of it, [1243] anyway, which consists of two U-shaped levers which can be brought over a groove and compress the cylinder down against the closure cock. It does away with the necessity of taking the time to unscrew the device.

Q. Are the wings 16, part of that?

A. The device is shown in Fig. 3, perhaps, to the best advantage, and consists of two U-clamps which fold up as a couple of handles. 19 is one portion of this device, and the other one 18, shown in Fig. 1. There is also shown a little clamping device 21, for holding it rigidly in position.

Q. In this Julius device then, it is possible to compress the solidified carbon dioxide in the expansion and compression chamber to a greater degree, by virtue of the rotation of the thread connection of the plunger of the device than it is possible by merely having the operator press inwardly on any of the plungers?

A. That is right, and the disclosures are the same as shown on the chart.

Q. Will you refer, Professor Clapp, to patent 1,104,920, issued to Osborne, in 1914, entitled: Art of Making Ice, which is No. 11 on Defendants' Exhibit EE, and point out what is there disclosed?

A. There is shown a device for making little pellets of ice or snow, and compressing the same. The cylinder is represented at 6, and going down through the apparatus to the [1244] pressing cylinder 21. There are a number

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of closures shown on this device. 24 is the closure which may be put in place so that the snow may be compressed against it. There is a deflecting apparatus 26, which may be thrown over, as shown in Fig. 2, so that after the material has been compressed it may be ejected from the opening 26. [1245] There is also described, but not shown, as a closure for the opening 25, which is described as the door or the gate valve, a gate valve, as we know, being used for high pressure steam, is capable of making a very tight closure.

Q. Since that is not illustrated in the drawing, will you point out in the patent where reference is made to the gate valve?

A. Page 2, commencing in line 45, I will quote:

"24 designates a pressure head which is adapted to be placed in position between the mold or compression chamber 21 and the cooling chamber 7, in order that this pressure head 24 may cooperate with the platen 22 when compressing the artificially frozen particles of water into a cake of ice. The ice cake is adapted to be discharged from one side of the stand pipe through a suitable opening 25, the latter being normally closed in the operation of the apparatus by a suitable door or gate valve, and positioned opposite to this opening is a movable member 26, the latter being shiftable at the proper time into the path of the cake of ice, for the purpose of deflecting the ice cake through opening 25 and discharging said ice cake from the stand pipe."

Also, on the same page, commencing with line 119:

"The door or gate valve is now adjusted to close the opening 25"—

Q. Did you read that correctly, Professor? [1246]

(Testimony of William Howard Clapp)

The Court: "The door or gate valve"—

Mr. Foster: "is now adjusted to open or close"?

A. "The door or gate valve is now adjusted to open the opening 25 and deflector 26 is moved into a position across the stand pipe. The platen 22 is raised by the action of the hydraulic press in a manner to bring the cake of compressed ice into contact with the deflector 26, the latter offering resistance to the upward movement of the cake of ice and forcing it through opening 25, thereby discharging or ejecting the ice from the stand pipe."

There is also shown, but no description given, of a closure member at the bottom end of the hail forming chamber, and the patent discloses that with means of these doors they are able to make these little pellets of ice continuously, and compress them intermittently.

To summarize, there is disclosed a chamber and a mold, closure lids, means for opening the chamber, supply or inlet, which I don't believe I have described. Water is allowed to spray down through the pipe 15, into the tank 14 from the top and cold air, refrigerated air, is introduced through the pipe 12 through the opening 13, the two commingling, the water falling through the uprising current of air and the air is then carried off through the outlet pipe 9, and is returned to the tank 16 for further cooling.

The Court: Didn't you misspeak there; doesn't that water come in through the conduit 15 into the chamber 6 by [1247] way of a sprinkler 14?

A. Yes. Did I say chamber 14?

The Court: Yes.

A. Yes, it comes in through the pipe 15, through the spraying device 14, into the chamber 6.

(Testimony of William Howard Clapp)

Q. By Mr. Foster: Then the cold air, as I understand you, enters through the pipes 13, and sweeps upwardly around goblets of water, and through the pipe and out?

A. That's right. To finish the disclosure, there is shown a supply or inlet, an outlet for air, pressing plunger, and hydraulic means for moving the plunger.

Q. As I understand you if we regard the gate valve, to which you have referred, which is located about where the lead line from 25 ends, as closed, the interior device would include the chambers 6 and 7, and compressing chamber 21, down near the rearward end; is that correct?

A. That is correct.

Q. Then due to temperature conditions, liquid which is supplied in that chamber is solidified, and the solidified material passes to the compression chamber 21, where it is compressed against the movable head 24?

A. That is right.

Q. When the movable head is removed the compressed block of the liquid material supplied may be displaced from the machine without interrupting the solidifying process that occurs in the chamber? [1248]

A. Yes.

The Court: All they did was to take a little piece of nature; they let water fall through the sprinkler head by gravity, through the cooling chamber, then it drops to meet the upward current of cool air, and freezes the particles of water? A. Yes, sir.

Q. By Mr. Foster: The cold air removed from this solidifying and compressing chamber is returned back to the system, so its value as a cool material is not lost?

A. That is true.

(Testimony of William Howard Clapp)

The Court: You keep on using the air time after time? A. Yes.

Mr. Foster: That patent to Osborne likewise was not a file wrapper reference against the patent in suit.

Q. Will you direct your attention to patent No. 1,288,255, issued in 1918, which is tab 12, Defendants' Exhibit EE, issued to Stastney, and there point out what is there disclosed?

A. Stastney describes a device for cooling soap, which consists of a double wall cylinder 14, having a jacket space, the outer wall being marked No. 5.

Q. Is the double wall chamber 14, Professor Clapp?

A. No.

The Court: Outer wall 5, inner wall 6?

A. I have that pasted over my diagram, so I [1249] can't see it.

The Court: The outer wall 5, the inner wall 6; that is in Figure 1? A. Yes.

The Court: Is it in Figure 2, also?

A. Yes. I should like to have the patent in which these figures have not been covered up, if you don't mind.

The Court: I was wrong about that. He uses 5 to indicate the unit, and 6 is the inner wall, and 7 the outer wall? A. That is right.

The Court: 14 is evidently the piston.

A. 14 is the piston; 16 an inlet for the air. 17 is an outlet. 20 is a stop cock placed on the cover 18, which may be sealed fast to the top of the cylinder 5. Then there are also shown, in Figure 3, down near the bottom, inlet pipes at the right and left, not numbered, for controlling the temperature of the jacket. In operation steam is first circulated through the jacket to warm it. The warm liquid soap is then introduced through

(Testimony of William Howard Clapp)

valve 10. Valve 18 is opened to permit any liquid that rises to escape; steam is withdrawn and carried away, circulated through the jacket coil; the soap then as it would tend to solidify, and might crack, pressure is put on the piston by introducing air through the pipe 16, and the soap is compressed. The head 18 is then withdrawn, and a wire [1250] frame is clamped in its place on top of the cylinder, and the soap is ejected and cut into bars as it passes out of the chamber.

The Court: You start out by putting the steam in that conduit over at the right; you circulate that steam around to bring the temperature of the mold up to about the temperature of that soap; then you take the steam out on the opposite side. [1251]

A. That is right; then cool it with the air the same way.

Q. And they put cold air in to cool the soap down?

A. Yes, sir.

Q. How do they get the soap out—from the top?

A. By introducing air pressure under the piston 14 through pipe 16 and raising the piston and compressing the soap against the head.

Q. By Mr. Foster: The handles 19 are for the purpose of permitting the quick removal of the closure head 18, is that correct, Professor? A. Yes.

Q. And is there any reference in this patent to the escape of gas, for example, air, out of the valve 20?

A. I believe it says that liquid may escape.

•Q. I direct your attention to line 85, page 1.

A. It refers to it as an air vent.

Q. Did you summarize as to this patent?

A. To summarize, there is disclosed a cylinder, a mold, a closure lid or head, means for opening the cham-

(Testimony of William Howard Clapp)

ber, supply inlet, an outlet for gas, a pressing plunger, and a fluid pressure means for operating the plunger.

Q. By the Court: They close off the flow of the soap and they close the flow of the cold air and they cut off the vent at 20, but they keep 12 open all the time to take out anything that has accumulated, is that right? [1252]

A. That is right, sir, your Honor.

Q. By Mr. Foster: The soap inlet as well as the gas outlet has a valve on it, does it, Professor?

A. They do.

Q. Will you direct your attention to the next British patent, No. 13,684, of 1891, issued to Tichborne, for "An Improved Process and Apparatus for the Manufacture of Solid Carbonic Acid," which is tab 26 of Defendants' Exhibit EE, and point out what is there disclosed?

A. This is an apparatus for the manufacture of solid carbonic acid, he calls it, and shows a snow chamber connected by an inlet through pipe G or opening G in the pipe, back to—no—an inlet through the valve c for carbon dioxide which has been previously compressed and liquefied, as illustrated, an outlet means in the top of the snow chamber with a screen so that the carbonic acid, carbon dioxide, may pass back to the system. There is a closure head at the bottom of this pressure tank which is easily removable.

The patent states also, page 2, lines 35 to 41: "It is obvious that the refrigerating chamber D whether fixed or movable may be attached by a suitable supply pipe and cock therein to the condenser and by a return waste pipe to the pump section, or vat, of the generating, purifying, compressing and condensing apparatus for the collection of CO₂," etc. [1253]

(Testimony of William Howard Clapp)

Also, commencing with line 20: "The said solid CO₂ may be collected by a suitable door E or exit from the said chamber D and the gaseous portion of the CO₂ collecting in the upper portion of the chamber, is returned again by the pipe F to the suction pipe a of the pumps, where it will be redrawn into the pumps A, and again passed either with a new charge through the same process of compression, liquefaction, and part solidification, as described above, * * *"

To summarize, there is disclosed a snow chamber, a closure lid or head, means for opening the same, a supply for liquid carbon dioxide gas, an outlet for the gas.

Q. Is it true that with respect to this closed chamber D of the Tichborne patent there is a liquid inlet line for liquid carbon dioxide having a valve for controlling the rate of supply?

A. That is right. The valve is C, I guess, on that.

Q. And also connected to this closed chamber D is an outlet line for gaseous carbon dioxide having a valve interposed which may be used for controlling the rate of egress of the gas from the closed chamber?

A. Yes; that valve being shown over at the left on the downcomer from that return pipe.

Mr. Foster: This patent likewise was not a file wrapper reference, your Honor.

Q. Now will you direct your attention to the British patent No. 7,436, of 1895, to Elworthy, for "Improvements in [1254] Methods of Solidifying Carbon Dioxide, and of Utilizing the Solidified Substance"—that is tab 27 of Defendants' Exhibit EE—and point out what is there disclosed?

A. This is described as "Improvements in Methods of Solidifying Carbon Dioxide, and of Utilizing the Solidi-

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fied Substance." The method of compressing, cooling, liquefying, etc., is shown diagrammatically. A new means is introduced here in that after the carbonic acid CO_2 has been compressed in three stages, with cooling between the stages, as illustrated by the figure at the left, and then goes to a condenser system, the condenser system is vacuum-jacketed, the air being withdrawn through pipe 5 which may be closed, the patent states, with a cock. The liquefied carbon dioxide is then allowed to expand. It passes out through the valve e at the bottom of the chamber where the coil terminates and enters a cylinder C', where it does mechanical work in driving this crank and rod mechanism, and is further expanded and cooled. The cooled gas then enters a snow chamber f in Fig. 1 at h and the carbon dioxide which does not change into snow is returned around a baffle board marked 10 through an outlet i to the inside of the vacuum-jacketed chamber, where it flows in countercurrent with the descending carbon dioxide in order to liquefy it.

The type of snow tank shows a double-walled chamber, likewise with a vacuum space in the jacket which may be made by suitable vacuum process and closed off. The snow which is [1255] formed leads direct, the patent states, into the chamber at m which, as the figure shows, is in gas-tight communication with the snow-forming chamber. A piston operated by a plunger at n then compresses the snow into what he calls a box, shown at the left hand of the space m. When the box has been filled with snow it may be removed and replaced.

(Testimony of William Howard Clapp)

Q. By the Court: The purpose of that baffle 10 is to concentrate it and spread it out, isn't it?

A. It is to prevent the snow which is formed from going into the exhaust, as far as possible.

Q. The exhaust, is that h or is that i?

A. i. I believe, yes.

To summarize, there is here disclosed a chamber, snow-forming chamber in a unit with a compressing chamber, a closure lid or head, which is the box, means for opening the chamber, a supply inlet for CO₂, an outlet for CO₂ gas, a pressing plunger, and hydraulic means are described for operating the plunger.

Q. By Mr. Foster: I wish to point out one fact in the patent with respect to the communication between the snow and compressing chambers. Professor Clapp, would you turn to page 4, commencing at line 22, and read that sentence, please?

A. Yes. "f is the double-walled solidifying chamber, also vacuum-jacketed, the bottom of the chamber is preferably made tapering, or funnel-shaped, as shown, and [1256] leads direct into a hydraulic press, the ram or platen of which compresses and snow formed, into the removable box at m."

Q. Because the means of actuating the plunger may be of interest to the court, would you read the sentence beginning at line 35 of the same page?

A. "The snow may be removed from the chamber f, either at intervals, or continuously, by means of a conveyor screw, or other suitable means, and compressed by hydraulic, or other power, direct to solid blocks, or in the manner hereinafter described."

(Testimony of William Howard Clapp)

Q. In your explanation with respect to this double-jacketed tower B, Professor Clapp, I think you referred to the letter e which I find at the lower right of that coil as indicating a valve. Did you intend to do so, e? That is a double-jacketed vessel at the left of Fig. 1, Professor Clapp, under the capital letter B, the heat exchange vessel, and down at the lower right is the letter e; and I think you referred to it as indicating a valve. Did you mean a valve or a line?

A. No; there is a continuous line; the coil passes right directly to the expanding piston C' and expanding cylinder.

Q. Thank you. Now will you direct your attention, please, to patent No. 1,546,681, issued in 1925 to Slate, for "Method and Apparatus for Producing Carbon Dioxide Snow," [1257] which is tab 15 of Defendants' Exhibit EE?

The Court: One thing I did not quite understand in connection with this last patent. I do not think you need to turn to it. There was a box m under the chamber f, and you said it was gas-sealed, that m was gas-sealed. What did you mean by that?

A. The patentee does not mean an open box. He shows later that it can be used to stamp—may I read?

Q. Yes. A. Commencing page 6, line 10.

Q. Wait until I find that. Yes.

A. "Instead of compressing it into the form of large slabs or blocks, the solidified dioxide may be compressed into thin sheets, or slabs, and these slabs may be so constructed, that they may be readily broken up into sticks, rods, tablets, or other small pieces. For the manufacture of aerated beverages without a machine, these pieces may

(Testimony of William Howard Clapp)

be of such a size, as to give off the proper quantity of gas to aerate the water in any given bottle."

Q. To aerate the water.

A. "Without the machine, these pieces may—"

Mr. Foster: I think you were referring to page 6, lines 5 to 10 initially, Professor Clapp.

A. I thought I quoted that. Page 6, lines 5 to 10. "The compressing apparatus is indicated in Fig. 1. m being a receptacle. below the chamber f, into which the carbonic acid [1258] snow passes, and is very forcibly compressed in the receptacle by means of a pressure ram actuated by a hydraulic cylinder n, valves of the usual kind being provided by which water under pressure can be admitted into the cylinder n. When the snow has thus been compressed, the ram is withdrawn and the block of carbonic acid ice removed."

I did not mean to convey the idea that when that box was removed that the system was not open to the atmosphere, any more than when the cap on the Cole device was removed. Wait a minute. I am not going to say that.

The Court: Go back, Mr. Reporter, and find that spot. I should have stopped him right then. He was talking about m in relation to the chamber f. Suppose we take a little recess now until you find it. This case will stand adjourned for a couple of minutes.

(Short recess.)

Mr. Foster: May the court please, before we get to the question the reporter has found, I think, in his notes, we have moved the two tanks and the model out into the hall and we would like the court's permission to remove it to have the gauge repaired.

The Court: Oh, yes, surely.

(Testimony of William Howard Clapp)

(Record read by the reporter as requested.)

The Court: That is what I wanted to have you explain, what you meant by "in gas-tight connection with the snow-forming chamber." [1259]

A. Your Honor, I have given a great deal of study to this figure. Fortunately or unfortunately, there is only one view shown, a side elevation view, which the patent describes as being partly in section; and m is described as the space there into which the snow falls and that space—

Q. By gravity out of the chamber?

A. By gravity out of the chamber.

Q. Yes.

A. That space can be occupied by the piston. When the piston moves over it covers that space and closes it. During the snowing operation if the piston is at the left, we have a closed chamber. In order to remove the box the piston would have to be retracted slightly, in which case it is possible that there might be air inlet there, but during the snowing operation and the pressing operation and until the piston has been retracted some and the box removed, the closure is complete, as I see it.

Perhaps I should go into that a little bit more. This man, Elworthy, is a chemist in Bombay, I believe, India: he is not an engineer.

Mr. L. S. Lyon: I don't know how the witness knows all these things.

Mr. Foster: The patent states, Mr. Lyon, on page 3, that Elworthy is "of Hill Road, Bandra, Bombay, in the Empire of India, Analytical Chemist."

Mr. L. S. Lyon: It doesn't say he is not an engineer. [1260]

A. No: it does not say he is not an engineer but there are indications of it. He describes the vacuum

(Testimony of William Howard Clapp)

process of making this chamber and it suggests at once the old Dewar flask turned upside down, somewhat foreshortened, conical sides, cylindrical bottom now, and a curved top. That was the form of the Dewar flask.

The problem is to put that flask, which would be made of sheet metal, on top of a housing for this cylinder, that housing being made in cast iron by any engineer of the usual procedure, and the figure as shown, I can reconcile the lines only on the premise that that is the relationship. I might draw a view as I see it, at right angles to this view.

The Court: Which one do you want?

Mr. L. S. Lyon: May I see the copy of the patent that is the official exhibit, if your Honor please?

The Court: I haven't got the official exhibit. This is my copy.

Mr. L. S. Lyon: Which is the official exhibit?

The Court: The one the clerk has.

The Clerk: The court reporter happens to have it now.

Mr. L. S. Lyon: I will have to get it.

The Court: This is the same.

Mr. L. S. Lyon: There is a space shown between there.

The Court: Yes; there is a space and that is what I was trying to find out about. There is a space shown here. Whether it is some kind of a platen or a seal across there [1261] I don't know, but there seems to be a space through here.

Mr. L. S. Lyon: If you put a magnifying glass on that, that is open at that point.

The Court: That is why I am asking about it. That seems to be.

(Testimony of William Howard Clapp)

Mr. L. S. Lyon: I do not believe the patent—the witness can correct me—but I do not believe the patent ever says there is a gas-tight communication between the two.

A. No; that is true; it does not. I don't think that Elworthy ever thought it was necessary. He was used to rigging up tubes. He has made provision for the saving of his carbon dioxide back to the system. He knows that he has made this tank so that it is capable of withstanding pressure. I don't think it ever occurred to him that anyone would think of permitting that gas to escape.

Mr. L. S. Lyon: The witness made one statement, your Honor, that I wonder if he could explain or illustrate. He referred to the piston and to the box. I wonder if he will tell us which parts on the drawing of the patent, which parts he calls the piston and which part he calls the box.

The Court: I am coming to that, because that bothers me. If there is going to be a closure there, there must be a head on that piston somewhere. I thought maybe this drawing might help us. Take your time, Professor.

A. I am thinking of how an engineer would start to solve that problem. (Diagramming on paper): Let that be the [1262] center line of the device as seen at right angles, thinking of this, now, as a conical circular member and this being the widest opening corresponding to this one in Fig. 1 at right angles—

Q. As being half the widest opening?

A. Yes. There would necessarily be a crosshead guide for a piston which would slide in here so that snow would not get under the thing, and then, as the usual operation, to guide it top and bottom. Now, looking at that in this direction, we have this line; we have that line;

(Testimony of William Howard Clapp)

we have this, and we have that, if it were shown in sections, but this line is not sectioned; this one would not be; if we were looking from the middle we would have the two lines, as shown, but it is partly in section, and I am going back to the fact that he was a chemist; that he was used to accounting for all of his material; that in his piping system it would be ridiculous to waste the gas.

Another possibility is this: That he was looking at it from the outside, and that he had sectioned it across this end, while this portion would be corresponding to the top closure of the piston at the right. Now, if he looks at it that way, and has made his section this way, on this second line, he would have this figure as indicated. He does not want the stroke here to be too long. He would have difficulty then in compressing the snow, and having to cut it off. He has the box filled with snow, and then withdraws it. [1263]

Mr. L. S. Lyon: I don't understand the witness, waving his pencil; I don't understand what he means by the box.

Mr. Foster: We will try to clarify that for you, Mr. Lyon, if you will save your questions for cross examination, with the court's permission, by having the witness mark the lines. May I, your Honor?

The Court: Yes.

Q. By Mr. Foster: Would you mark the lines on the flange you have drawn, upper and lower, as 1 and 2; then would you mark those lines in the patent that correspond to it, to which you have referred, on your sketch as 3 and 4 of the patent drawing. Will it be agreeable if that is done at the close of the session; if we insert those numbers on the original?

The Court: Yes.

(Testimony of William Howard Clapp)

Q. By Mr. Foster: What is the box at m, as referred to in that patent?

A. Here is a holding device against which pressure can be exerted.

Q. Will you give the holding device the number 5 on the patent drawing, Professor, and the box at m referred to by the patent, would you give that No. 6. I notice a thin little rectangle or element. You have marked 6 about the middle of it. What is that, according to your understanding?

A. It might be a handle, or a method of pulling out the box, which I take to be a mold of some sort. [1264]

Q. Would you give the handle referred to the No. 7, so the record may be clear?

Mr. L. S. Lyon: You referred to the box, did you, in your drawing?

Mr. Foster: I suggest, if the court please, that it would be proper order for Mr. Lyon to reserve his questions.

The Court: That is exactly what I want to know, where the head of the piston is; where the box begins; where the box ends; what there is between the box and the baffle 6.

A. You take the box as ending at what I shall mark as line 8, vertical line 8; the bottom of the box ending at the vertical line 9, the piston advancing at least as far into the box at the present time as it is capable of being retracted, until it opens the closure which now exists between the piston and the snow chamber.

Mr. Foster: Is the witness' description clear to your Honor?

The Court: Yes. I haven't studied this patent very much. I don't know where you get that, except by your

(Testimony of William Howard Clapp)

knowledge of engineering. Where is that talked about in this description, in the language of the patent?

Mr. Foster: Would you refer to the patent description?

A. Yes, the connection between the box and the snow chamber?

The Court: Yes, and the baffle.

A. The baffle 10? [1265]

The Court: Yes. I don't know whether you call it a baffle. It is the thing you exert the pressure against.

A. Yes, the box. There is no reference made to that.

The Court: There has got to be something to press against. A. Yes, and hold the piston in place.

The Court: You call it a baffle?

A. Yes. I would call 5, as we have marked it, a baffle.

The Court: A stop?

A. A stop. There is no foundation shown upon which this snow chamber and pressing chamber would rest, nor one for the pressing cylinder. That can be clearly understood. There is just the one view.

Q. By Mr. Foster: Would you, Professor, turn to the part of the patent description which describes the construction you have been illustrating?

A. Commencing line 22, page 4: [1266]

"f is the double-walled solidifying chamber, also vacuum-jacketted, the bottom of the chamber is preferably made tapering, or funnel-shaped as shown, and leads direct into a hydraulic press, the ram or platen of which compresses any snow formed, into the removable box at m."

(Testimony of William Howard Clapp)

Q. Would you refer also to page 6, Professor, if Mr. Lyon is finished with his use of your patent, beginning at line 5.

"The compressing apparatus is indicated in Figure 1, m being a receptacle, below the chamber f, into which the carbonic acid snow passes, and is very forcibly compressed into the receptacle by means of a pressure ram actuated by a hydraulic cylinder n, valves of the usual kind being provided by which water under pressure can be admitted into the cylinder n. When the snow has thus been compressed, the ram is withdrawn and the block of carbonic acid ice removed."

Mr. L. S. Lyon: Couldn't I get this?

Mr. Foster: Couldn't Mr. Lyon wait?

Mr. L. S. Lyon: I would like to get that now. I would suggest, your Honor, this is quite important. The witness has put these numbers, which have been mentioned in his testimony, on the copy of his own patent. I would like them to be put on the official exhibit before we adjourn, so they will be preserved.

The Court: I was going to ask the clerk to do that [1267] as soon as we got through this afternoon. It says here on page 4—

Mr. Foster: Mr. Lyon, would you let the witness refer to his patent while the court is calling his attention to it.

The Court: Line 25, page 4:

"The hydraulic press may however be entirely separate, and the snow being removed from the bottom of the solidifying chamber by any suitable means, may then be placed in the box, and compressed in the usual way. When the box at n is full, it may be removed and another be put in its place, and a slab of compressed snow may then be taken out."

(Testimony of William Howard Clapp)

Mr. Foster: If I may suggest, I think that sentence that the court first commenced to read should be read in the light of the preceding sentence.

The Court: Yes, he read that.

Mr. Foster: It is my understanding that the use in the sentence first read by the court, "The hydraulic press may however be entirely separate", is a suggestion of an alternative procedure.

The Court: That is right. Evidently this removable box at n has an open face exposed to the head of the hydraulic piston.

A. That is right, yes.

The Court: He did not make much more intelligent a drawing that I would. [1268]

Mr. Foster: Before we leave that, may I suggest this: In the sentence preceding the one the court read, reference is made in the last couple of lines that the snow chamber leads directly into a hydraulic press, the ram or platen of which compresses any snow formed, into the removable box at m. It doesn't call the box m, and on page 6 m is referred to in line 5, m being a receptacle into which the carbonic acid snow passes for its compression. In other words m is the compression chamber, as I understand it, and the box is identified as being at m, but not m indicating the box.

Mr. L. S. Lyon: That isn't what the witness testified to, your Honor.

Mr. Foster: I think it is. I merely wished, before we left it, to call your attention to the fact that in the paragraph the court referred to the box is not identified as m, but at m.

The Court: I think it is a kind of distinction without a difference, isn't it? Actually, apparently he plans to

(Testimony of William Howard Clapp)

have a lot of these convenient boxes to use as a receptacle for applying pressure horizontally with this hydraulic ram, and you let the snow drop; that has to be opened at the top, and at the right-hand end, because the snow has got to drop in from the chamber f, hasn't it?

A. That is, the box has to be opened at the right-hand end, yes. [1269]

The Court: This receptacle has to be opened at the right-hand end to let the head of the piston press the snow. It also has to be opened at the top during the time that gravity is sending the material into it, doesn't it?

Mr. Foster: Yes.

The Court: So it is not a box at all, it is open on two sides, isn't it?

Mr. L. S. Lyon: No.

The Court: It is just a place? A. Yes.

The Court: And you pull that out?

Mr. Foster: May I ask the witness a question about your Honor's understanding of it, your Honor?

The Court: Surely. Maybe I have stirred up a mountain out of a mole hill, but I did not understand it; what I did not understand was the gas-tight phase of it.

Q. By Mr. Foster: As I understood what you stated with respect to this box shown at the left of the rectangle marked m, it was a box or mold having a bottom and four sides; is that correct?

A. Having a bottom and four sides; no top.

Q. And no top? A. Yes.

Q. And carbon dioxide snow would fall down from the chamber f into this space m, as it was compressed by the plunger moving through that space into this open topped box; [1270] is that correct?

(Testimony of William Howard Clapp)

Mr. L. S. Lyon: I object to that as suggestive. The witness has said this space marked m, ending at the line marked 8, on the drawing, is the plunger or piston. He was very clear about that, when your Honor was asking him.

A. The receptable is the space in which the plunger moves. In the position shown, the plunger is filling the space, and has pressed the snow into the box. The back end of the plunger is clearly shown as distinct from the receptacle which it occupies.

Q. Would you give the back end of the plunger, to which you refer, the next number?

A. No. 10.

Mr. Foster: I am afraid that was not clear, your Honor.

The Court: It is all clear to me. Now relaxed, this space is open so that the product may drop by gravity into the space m? A. Yes.

Q. The space m must be open at the top, must it not?

A. That's right.

Q. The space m must be open here to permit the head of the piston to come in contact with the mass of material, must it not?

A. No, as you see the position of the piston, when it [1271] has been moved to the right, the left-hand end of the piston, which might be represented by the line 8, if it is not in the box, has been moved over to some position, and to the left of the line 10, so that the piston occupies a position largely outside of the chamber, but not entirely, as it must be guided.

(Testimony of William Howard Clapp)

Q. But so far as the space is concerned, if there is any closure on the right-hand side it is done by the head of the piston, coming up to that point, isn't it?

A. It is done by the top of the piston coming to that point. I am thinking of this as a rectangular piston, pressing a block. May I change that line to bring it to conformity, your Honor, to the same level? Maybe that isn't quite center. Now, this is a circular opening at right angles to this drawing, which I have made, and when the piston comes back it will occupy some position near the edge of the circle, and will be in contact along the line of closure.

Q. But suppose we draw the head of this piston way back here, just to start this cycle, so you have a place there perfectly free to clean it out, or do anything you please, the first thing you do is to move the head of your piston up in elignment with this edge of the chamber, so as to make a closure here; isn't that right?

A. No, I don't see that the left-hand end of this piston, that face, ever moves outside of this chamber. [1272] It would occupy a position perhaps, as indicated by the dotted lines.

Q. You have got to keep this space open for the material to drop down to this space m?

A. That is right.

Q. So far as this space is concerned any closure on this side is the piston head, isn't it?

A. The top face.

Q. The top face of the piston?

A. Yes, making connection with the walls, as we had them on the other side. [1273]

(Testimony of William Howard Clapp)

Q. When that is full, that material is compressed, is it?
A. That's right.

Q. And pushed into this box here, is it not?

A. That is right.

Q. Then the box is taken out? A. Yes, sir.

Q. By this little handle, and another one stuck in there, and you start all over again? A. Yes, sir.

Mr. L. S. Lyon: May I ask a question, your Honor?

The Court: Certainly.

Q. By Mr. L. S. Lyon: As you understand this drawing, is the bottom of this hopper, or flask, which you call circular, and if so, is the space m circular, or what space is it?

A. No, the bottom of the hopper is circular, and the space m underneath the hopper is rectangular.

Q. By the Court: As a practical matter it would not make a particle of difference whether the bottom of the chamber had been restricted to be angular to conform with the lower space, as long as it could be used; you couldn't have that space m rectangular and operate your ram?

A. I see no reason why not. Most of these pressing apparatuses use rectangular pistons.

Q. You couldn't have it circular or cylindrical; it would have to be rectangular, in order to make it operate?

A. Yes. [1274]

Q. It did not make any difference whether you dropped it in there in a circle smaller than the rectangular, or whether you squeezed the sides of the chamber to make it at the outlet conform to the shape of the rectangle?

A. Except you would have a better closure as the piston was withdrawn; it would occupy a position something as indicated there, but it would be closed on top.

(Testimony of William Howard Clapp)

Mr. L. S. Lyon: Your Honor, the point I have in mind is: This is a round throat at the bottom. We have got to have some kind of a rectangular receptacle there. I don't see from anything that has been said here how they could match.

The Court: Suppose you elongated this from square to rectangular, here is the outlet cylinder, if the outlet cylinder is within the edges of the rectangle, the material is going to drop in there?

Mr. L. S. Lyon: That is correct.

The Court: I imagine what they did was to flatten out the sides of the cylinder, and bottom, and made it rectangular and fitted it in.

Mr. L. S. Lyon: That is not shown that way.

The Court: No, it doesn't show.

Mr. Foster: One more question about that.

Q. Referring to Fig. 1 of the drawing of this chamber marked b, I notice the outer wall on each side of the chamber is a double line. Is that to indicate the thickness of the wall, as you understand it? [1275]

A. There is a covering over the outer wall to prevent heat flowing into the chamber.

Q. That is identified as No.—it isn't clear to me on my print. Is it No. 2?

A. I believe that is 2. It looks like p, in the drawing.

Q. Is that truly a sectional view? Should that wall be sectioned?

A. Yes, he says this is partly in section.

Q. But it isn't sectioned?

A. It isn't sectioned, no.

Mr. Foster: Does the court have any more questions on this patent?

(Testimony of William Howard Clapp)

Mr. L. S. Lyon: If we are going to leave that patent, may I ask the witness to hand the copy of the patent which he has marked to the clerk?

The Court: I guess you had better have Mr. Foster do it. He may know how to make the marks on the drawing, better than the clerk.

Mr. Foster: I will be glad to do it in the presence of Mr. Lyon.

The Court: Fix my copy up also. I will have it here.

Q. By the Court: That apparatus that you referred to is nothing but a liquefying apparatus for carbon dioxide, is it?

A. That is all. It is a cooling liquefying apparatus.

The Court: We aren't particularly interested in that, are we? [1276]

Mr. Foster: Only for this reason. During his testimony, in one of his answers Professor Clapp mentioned that the drawing, as he has explained it, of this pressing chamber m would be much more readily understood were the last two lines shown with section lines. I was calling attention to the fact that the other walls in the same apparatus, which were to indicate the thickness of the wall, were indicated merely by two lines, without hatching or cross-sectioning.

The Court: I understand.

Mr. Foster: The next patent is 1,546,681, issued 1925, to Slate, and is tab 15, of Defendants' Exhibit EE. Would you direct your attention to that patent, please, Professor Clapp, and explain what is there disclosed?

A. This patent discloses a method—apparatus for producing carbon dioxide snow, and it consists of a snow chamber marked 14, partly in section, which is closed with a closure head, consisting of a piece 12, a ring of com-

(Testimony of William Howard Clapp)

pressible material, to make a seal 13, and a threaded connection to screw onto the tank at the bottom. This is a well-known device for obtaining a seal, inasmuch as the pressure which is exerted on the top area must be borne by the smaller area in contact with the ring, and it is very effective. The threaded connection perhaps should be called attention to. It is what we call interrupted threads, where a portion of the threads have been cut away axially, so we can make a quick engagement. They are carefully made, and are used in [1277] breach blocks of guns, so that they can be easily broken and replaced.

Q. Those threads are shown in Figs. 2 and 3?

A. They are shown in Figs. 2 and 3. There is a pipe 4, connected through a valve 5, to some source of carbon dioxide, the carbon dioxide being illustrated with its outlet valve 3. There are also connections through the T to a compressor, one through pipe 15 as the inlet, and the other through pipe 19 as the exit. The method of operation consists in opening valves 3 and 5, letting the carbon dioxide flow from the tank marked 1, into the snow-forming chamber. I think that number is 8, and that I called it 14. —into the snow-forming chamber 8, until such a time as the pressure on the gauge shown at the top of the snow chamber, and marked 6, shows that we have liquid carbon dioxide in the chamber.

The valve 5 is then closed and material is returned through pipe 4 and 15 and the cock 16, to the compressor and out through pipe 19 to pipe 4, valve 3 being opened into the tank, from which it originally came. This causes rapid expansion and a drop in pressure, and a cooling of the tank, and this operation may be repeated until such time as we have accumulated sufficient supply of snow within the tank, when the valves are being closed and

(Testimony of William Howard Clapp)

the closure member 10 being loosened, the snow must be removed.

It is interesting to note here that this is a device entirely suitable for making triple point ice, inasmuch as [1278] it is abundantly strong; the pressures can be regulated by gauge. In fact, you can compress right in there; in fact you have a piston head 12, which, if you attach it by mechanical means, would compress the snow within the chamber.

To summarize, there is disclosed a snow-forming chamber, a closure lid or head, means for opening the chamber, a supply or inlet, an outlet for gas, this being the same, and used for the purpose alternately.

Q. The court may be interested, I think, in finding the exact place in the patent to which you refer, as indicated, the operations were continued until there was liquid carbon dioxide in this chamber 8.

A. Yes, beginning on page 1, line 91.

"The operation above described is repeated and the walls of chamber 8 become so cold from the previous filling and refrigeration that any gas that may enter the chamber is liquefied. As soon as the gauge 6 registers atmospheric pressure, the liquid carbon dioxide in chamber 8 has vaporized until the latent heat of vaporization has turned a portion of the liquid to ice or snow. As it turns to snow, the pressure may be completely removed and the carbon dioxide will remain a solid to be handled and used as the operator may choose."

Q. Read the next sentence too.

A. "The carbon dioxide snow, as it thus comes from the refrigerating chamber, is porous and light, but is then [1279] compressed by any suitable apparatus into

(Testimony of William Howard Clapp)

dense cakes of any convenient size to fit the requirements of the trade."

Q. Do you find on the same page, line 79, reference to the presence of liquid carbon dioxide in that chamber?

A. Beginning line 78:

"When the pressure gauge 6 registers the pressure that would indicate liquid in chamber 8 at the temperature of the chamber, the valve 5 is closed."

Mr. Foster: Does the court have any questions with respect to this patent?

The Court: This thing becomes, of course, much more simple after you get it going, and get this chamber very cold, doesn't it?

A. Yes. For that reason, I suppose he refers to alternately charging it, and withdrawing the carbon dioxide through the compressor, until a mass of snow has been accumulated.

The Court: No questions.

Mr. Foster: The next patent is that to Slate, 1,546,682, issued upon application filed January 10, 1924. Would you refer to that? It is tab 16, of Defendants' Exhibit EE. I will ask you to explain what is there disclosed.

A. This patent discloses a tank and snow chamber 22, and means for attaching it to a head 23, an inlet nozzle 24, for liquid carbon dioxide, an outlet through the pipe 28, which pipe is caused to surround the inlet pipe, so as [1280] further to cool the liquid gas.

The Court: What is the object of giving this the whirl, to get quicker action?

A. Well, I suppose he thought he would get much more rapid expansion and cooling, and Slate may have thought that he could use up energy in this way; that it

(Testimony of William Howard Clapp)

would be more efficient. In a later apparatus he uses a portion of the energy for driving it, helping drive the mechanism.

Q. In that connection would you read the sentence on page 1, line 68?

A. "The snow being heavier than the gas settles to the outside and bottom of the container by centrifugal force and by gravity. The gas being lighter than the snow collects in the higher and central portion and is forced to the position in the drawings by the whirling movement of the inflowing gas and escapes through the discharge pipe 28."

There should be a separation of the snow from the gas to some extent by that process.

Q. In the preceding Slate patent, you referred to the gas pipe connected to the top, No. 4, being used alternately as an inlet and outlet. That is not true of this Slate patent, 1,546,682, is it?

A. No, this patent shows a separate inlet and a separate outlet.

Q. If you will briefly summarize the disclosure.

A. To summarize, there is disclosed a chamber, snow-[1281] forming chamber, a closure lid head, and means for opening the chamber, a supply or inlet for liquid CO₂, and an outlet for gas.

The Court: 22 is apparently removable, and you can stick another one on?

A. Yes, it isn't disclosed as to the exact construction. It infers that this intermediate piece is slipped over the bottom of the container, and comes up against a sealing head, at the top, and is then compressed and sprung slightly into the head, and that the bottom of the tank

(Testimony of William Howard Clapp)

rests on some support, and that head is heavy enough or that other means are used to withstand the pressure.

The Court: At that temperature they must have to insulate that tank pretty well at 22.

A. It certainly would be better, if they were running continuously. Of course, you can keep it pretty cool. I don't think it would be any trouble, except heat would flow in, and it would be less efficient.

Q. In connection with that, would you read to the court the sentence beginning on page 1, line 91, if you please? That is patent 1,546,682.

A. Beginning with line 86—

Q. With line 91. Page 1.

A. "The above described method of making the carbon dioxide snow may be used for making snow for various purposes by applying a removable chamber 22 to dome or converting [1282] chamber 23 and when filled this removable chamber 22 may be taken off and emptied and replaced for refilling."

Mr. Foster: I wish only to call the court's attention to the fact that after the application for this patent there was a division of the earlier application, as shown by the heading, January 10, 1924, serial No. 685,482, and that patent 1,546,681 was in identically the same manner a division of exactly the same application. I mention that, because the earlier Slate patent 1,546,681. is a smaller number, issuing on the same date, was the patent which, as Professor Clapp has read, taught in line 106, that the carbon dioxide snow could be compressed by any suitable apparatus.

(Whereupon an adjournment was taken until 10:00 o'clock a. m., Tuesday, May 23, 1944.) [1283]

Los Angeles, California, Tuesday, May 23, 1944;
10:00 a. m.

(Parties present as last noted.)

Mr. Foster: If the court please, we have a new gauge and, with the court's permission, if Mr. Morris will look at it and see that there is no snow, we would like to have the workmen here to operate the model first.

The Court: I had another matter on and so I just happened to be on the bench. You want to do that now, do you?

Mr. Foster: I would like to while the apparatus is here.

Mr. Morris: Will Dr. Jones examine the apparatus? Mr. Foster wants to make another test.

The Court: I happen to have another matter on at quarter to twelve today and wonder if it would make any particular difference to you if we just go right on through until about twenty minutes to twelve, without taking a recess, with this understanding: That if the witness or anyone wants to take a short recess, just say so, otherwise we will go through until about twenty minutes of twelve and then we will make up a little time toward the latter part of the afternoon. If that is not inconveniencing you, it will be a great accommodation to me.

Mr. Foster: We will be very happy to do so.

Mr. Wilson, will you place the piston in the chamber and attach the top plate? [1284]

Mr. Wilson has placed the rubber gasket upon the top of the device and is now placing the top plate upon the model and is securing the top plate in place with four bolts.

The model has attached to that pipe near the bottom thereof, which has no pipe diametrically opposite, a tank of liquid carbon dioxide.

(Testimony of William Howard Clapp)

rests on some support, and that head is heavy enough or that other means are used to withstand the pressure.

The Court: At that temperature they must have to insulate that tank pretty well at 22.

A. It certainly would be better, if they were running continuously. Of course, you can keep it pretty cool. I don't think it would be any trouble, except heat would flow in, and it would be less efficient.

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A. "The above described method of making the carbon dioxide snow may be used for making snow for various purposes by applying a removable chamber 22 to dome or converting [1282] chamber 23 and when filled this removable chamber 22 may be taken off and emptied and replaced for refilling."

Mr. Foster: I wish only to call the court's attention to the fact that after the application for this patent there was a division of the earlier application, as shown by the heading, January 10, 1924, serial No. 685,482, and that patent 1,546,681 was in identically the same manner a division of exactly the same application. I mention that, because the earlier Slate patent 1,546,681. is a smaller number, issuing on the same date, was the patent which, as Professor Clapp has read, taught in line 106, that the carbon dioxide snow could be compressed by any suitable apparatus.

(Whereupon an adjournment was taken until 10:00 o'clock a. m., Tuesday, May 23, 1944.) [1283]

Los Angeles, California, Tuesday, May 23, 1944;
10:00 a. m.

(Parties present as last noted.)

Mr. Foster: If the court please, we have a new gauge and, with the court's permission, if Mr. Morris will look at it and see that there is no snow, we would like to have the workmen here to operate the model first.

The Court: I had another matter on and so I just happened to be on the bench. You want to do that now, do you?

Mr. Foster: I would like to while the apparatus is here.

Mr. Morris: Will Dr. Jones examine the apparatus?
Mr. Foster wants to make another test.

The Court: I happen to have another matter on at quarter to twelve today and wonder if it would make any particular difference to you if we just go right on through until about twenty minutes to twelve, without taking a recess, with this understanding: That if the witness or anyone wants to take a short recess, just say so, otherwise we will go through until about twenty minutes of twelve and then we will make up a little time toward the latter part of the afternoon. If that is not inconveniencing you, it will be a great accommodation to me.

Mr. Foster: We will be very happy to do so.

Mr. Wilson. will you place the piston in the chamber and attach the top plate? [1284]

Mr. Wilson has placed the rubber gasket upon the top of the device and is now placing the top plate upon the model and is securing the top plate in place with four bolts.

The model has attached to that pipe near the bottom thereof, which has no pipe diametrically opposite, a tank of liquid carbon dioxide.

Now will you proceed, Mr. Wilson? Mr. Wilson is opening the valve, inlet valve, for the liquid carbon dioxide. Pressure has been about 90 pounds since immediately after starting the operation. It fluctuated somewhat above 95 and is now at 90 again. The inlet has been open about one minute; one minute and 15 seconds; one minute and 30 seconds. The pressure remains at about 90 pounds gauge.

He has closed the valve at two minutes and 20 seconds. Mr. Wilson now opens the valve wide open in the top of the device and the pressure, as indicated by the gauge on the top, commences to fall.

Mr. Jones: The outlet line being partially plugged, discharged in an irregular manner during the blow-off time.

Mr. Foster: Mr. Wilson is now connecting the gas inlet in the bottom of the model to tank of carbon dioxide gas, not a liquid solid carbon dioxide, but in gaseous form. He is now opening the gas line to permit gas to enter. The pressure rose to about 600 pounds. He is now disconnecting the gas line in the bottom of the model.

Mr. Jones: I call attention to the fact that there was [1285] some liquid in the connection from the gaseous carbon dioxide cylinder, as shown by the discharge of snow.

Mr. Foster: Mr. Wilson is now removing the four nuts at the top of the model and removing the top plate and gasket.

It will be seen that in the inner cylinder there is a body of solid carbon dioxide.

Do you have a device to bring it out with?

He has removed the cake of carbon dioxide called the block of carbon dioxide from the device, and offered it to

plaintiffs' counsel and their experts for their examination. Just refrain from tearing it apart until the Judge sees it, Mr. Jones.

(Product produced by experiment exhibited to the court.)

Mr. Foster: The compressed block of solid carbon dioxide has been handed to the court for inspection.

Now, one other matter, if the court please, before we continue with the direct examination of Professor Clapp who was upon the stand at our last session.

Plaintiffs' counsel, as they have stated in open court, two days before the trial gave to defendants' counsel photostatic copies of some agreements that had been made by the plaintiffs, or one of them, which are related to the patent in suit. Inasmuch as they were given to the defendants' counsel with the request that the defendants admit the genuineness of the documents, we presume that the [1286] plaintiffs will have no objection to reference being made to them in this record and will not deny their authenticity. We do not think they wish to. And in order to conserve the time of the court and facilitate the presentation of proofs, we think they will admit that certain of these agreements were made effective as of certain dates and contain certain provisions and related to certain patents. Instead of placing representatives of the plaintiffs here in court upon the stand and going through the formality of examining them with regard to it, we have prepared a list of those facts which we think the documents clearly show and that the plaintiffs will be willing to submit. With the court's permission, unless the court objects to that manner of securing the facts most expeditiously, we think, we would like to have plaintiffs' counsel examine this list we have prepared.

The Court: Just have the matter considered over lunch and we will take it up this afternoon and find out whether it is satisfactory to them.

Mr. Foster: I will hand two copies to plaintiffs' counsel.

Professor Clapp, would you resume the stand? [1287]

WILLIAM HOWARD CLAPP,

recalled.

Direct Examination

resumed.

Mr. Foster: Did the court sufficiently observe the degree of hardness of the block that was made?

The Court: I noticed that when plaintiffs' expert pinched it at the side, that at that time it seemed to give way rather readily. Has it hardened somewhat since?

Mr. Foster: No, it is the same degree. If the court will observe it, pushing a pencil, or anything of that nature, on the bottom or side of the cake, the degree of hardness I think will be apparent. Your Honor will understand that with the pressure employed in pressing the block, as noted in the record, it is not nearly as great a degree of compression or pressure upon the piston as there would be in commercial operation.

Q. Professor Clapp, near the close of the session on Friday you were referring to a sketch which you made, which illustrated one manner in which this hopper and compression cylinder of the Elworthy British patent could be connected to the snow chamber.

I wish to offer that sketch when I can locate it. In the meantime I wish to ask Professor Clapp, have you caused to be made, under your direction, a drawing more clearly illustrating the construction to which you were referring at that time? A. I have. [1288]

(Testimony of William Howard Clapp)

Q. Would you produce it, please? I will ask the clerk to mark this sketch for identification as defendants' exhibit.

The Clerk: GG.

[Note: Defendants' Exhibit GG will be found in the Book of Exhibits at page 1563.]

Mr. Foster: I have handed plaintiffs' counsel a photo-static print, and I will hand the clerk another print for the use of the court.

I notice some pencil numbers upon Defendants' Exhibit GG for identification. Do those numbers correspond with the numbers which you placed upon the drawing of the Elworthy British patent, 7,436, during your testimony on Friday? A. They do.

Q. Would you give a brief explanation of the construction illustrated in Defendants' Exhibit GG with regard to the markings on that British Elworthy patent?

A. This construction represents an external view; what we call a side elevation, of a pressing chamber, a box 6 into which the material is compressed, and a circular opening into the pressing chamber, which he refers to as the receptacle m, that opening being represented by the lower and smaller of the ellipses on the top of the pressing chamber. There is also shown a similar possible rectangular opening. The patent states that the bottom of the solidifying chamber may be tapering or funnel-shaped, and leads direct into the receptacle at m, and is very forcibly compressed into the box at m. That, and the following statement that the hydraulic ram may be entirely separate, are the only [1289] statements in the wording of the patent that would show a direct closure

(Testimony of William Howard Clapp)

connection. For the rest we have to go to the relationships or context, of which I spoke.

This drawing shows the plunger in the receptacle. The forward end of the plunger, forward facing, that is, nearest the actuating ram, is shown flush with the front end of the receptacle m at the point marked 10. The point marked 8, which I have referred to as the front edge, vertical edge of the box, is also shown against the pressing chamber 9, in the rear of the box 6. Up next to the box, at 7, is a handle, or means by which it may be removed, and I should state that the box is resting on its edge with the front opening facing the receptacle at m. The lines which are shown on the drawing marked 1, 2, 3 and 4 would then represent the flanges on the box or receptacle, which would be necessary for an attachment of the solidifying chamber to the box. I do not say that this is the only way that the lines in the drawing might be interpreted. It would seem more logical to say that this is not a sectional view.

Q. Now, you are referring to the view of the British patent?

A. I am now referring to the view of the British patent. For in that case the space between the lines marked 3 and 4 should be shown in sections. Also the box certainly is not shown in section, and we see the handle on the outside, and the hydraulic actuating cylinder is not shown in section, so [1290] it seems to me more logical that this is to take the view that this is an external view of the compressing chamber.

Q. Professor Clapp, I notice that at the top of this sketch or drawing, Defendants' Exhibit GG, there are two sets of broken or dotted lines; one of them, rather light, is a dash line, the dashes being substantially of equal

(Testimony of William Howard Clapp)

length. Do I understand that that indicates the construction at the discharge opening into the pressing cylinder as circular in cross-section?

A. I am not certain that I get your question. Mr. Foster.

Q. Let me reframe it. I notice at the top of this drawing or sketch that there are two sets of broken or dotted lines. One of these sets is a set of dash lines, the dashes being of substantially equal length. Is my understanding correct that these dash lines indicate the construction which provides a circular opening for the snow to pass into the compressing chamber?

The Court: Do you mean into the receptacle m?

Mr. Foster: Yes, into the chamber that the piston reciprocates in.

A. Yes, the dash and dot lines represent an alternate method in case the openings were not circular, but rectangular.

Mr. Foster: Has the court any questions with respect to Defendants' Exhibit GG? I will offer the exhibit marked GG for identification into evidence as Defendants' Exhibit of the same letter. [1291]

The Court: It may be received for the purpose of explaining the testimony of this witness.

[Note: Defendants' Exhibit GG will be found in the Book of Exhibits at page 1563.]

Q. By Mr. Foster: I will ask you if this sketch, which I hand you is a sketch which you made during your testimony on Friday, with respect to the same patent. Professor Clapp? A. It is

(Testimony of William Howard Clapp)

Mr. Foster: I ask that this be received in evidence as Defendants' Exhibit HH.

The Court: It may be so received.

[Note: Defendants' Exhibit HH will be found in the Book of Exhibits at page 1564.]

Q. By Mr. Foster: Professor Clapp, in your testimony with respect to this Elworthy British patent 7,436, you referred to a box, to which you have applied the No. 6 in the sketch, as having an open top. In order that the record may be clear, do you mean that the top of the box, in the position in which it is illustrated in Defendants' Exhibit GG, of the drawing of the British patent, was open at the top?

Mr. L. S. Lyon: I think the testimony of this witness should be confined to what the drawing, as a drawing, shows, and the specification, as a specification, describes. This being a foreign patent the law is well settled that it is not effective for anything except what it actually describes in the written specification, or shows in the drawings. A foreign patent, which the witness admits is capable of different constructions, cannot be given a construction that will destroy the patent in this country. The question does not ask the witness what the drawing actually shows, or what [1292] the patent specification actually describes.

The Court: I think that is undoubtedly true as a matter of interpretation of a foreign patent. There was a little confusion in the testimony of this witness last Friday, because he did exactly what counsel did in his question: he confused the word "box", as a chamber in which the actual pressing took place finally, and the re-

(Testimony of William Howard Clapp)

ceptacle m, and he also confused the top and side of that box, because he seemed to say that the top of the box was open. Now, in this drawing, the top of the box is open, if you consider that it is lying on its side.

A. That's right.

The Court: The top of the receptacle is naturally open, because it must receive the snow, or the product of the apparatus, into the receptacle m, and this must be open, technically, on the near side of the baffle at the end of the hydraulic piston, or the piston that does the compressing, in order to permit that piston to fit in, that is true, is it not?

A. Yes.

The Court: In other words, so far as the receptacle is concerned, this baffle at the end of the piston is a part of the piston, and there is no barrier in the receptacle for the baffle to move if it came up ultimately to the point 8, is that true?

A. I am not clear as to what you mean by baffle.
[1293]

The Court: What do you call this?

Mr. L. S. Lyon: A ram.

The Court: That is what you call a ram?

A. Yes; we referred to the stop against which the drawing showed that the box might have been pressed, as a baffle, the other day.

The Court: That's right.

Q. By Mr. Foster: Do you agree with the court's statements?

A. I do.

Mr. L. S. Lyon: May I call your Honor's attention, in connection with my objection, to the fact that I believe there has been a misstatement here, when we refer to a removable box as a separate receptacle. I call your attention to page 2 of the complete specification of the patent.

(Testimony of William Howard Clapp)

There are only two mentions of m in the specification. On line 25, which refers to a movable box at m, and then three lines down "when the box m is full." I think something is being read into this patent which is not there when we talk about a receptacle for the ram or snow, which is a separate thing from the box. The letter m is immediately below the throat of the snowing device. That is what you refer to as m, that is the removable box, according to the specification.

Mr. Foster: I don't agree. The specification reads, on page 6, beginning line 5:

"The compressing apparatus is indicated in Fig. 1, m being a receptacle, below the chamber f, into which the [1294] carbonic acid snow passes, and is very forcibly compressed in the receptacle by means of a pressure ram actuated by a hydraulic clinder n."

Mr. L. S. Lyon: There the same device is referred to as a receptacle, but never is there in the patent a statement that the part, where the witness marks the handle 7, is a separate part from the part marked m, and separably removable. If the whole part m were removed, the whole structure obviously would have to be different from the Exhibit GG. Where in the patent specification is there any statement that there is a separately removable box, separate from the part m? In fact the specification definitely states, line 28, page 2 of the complete specification, if your Honor has the complete specification—there is a preliminary specification, and then a complete specification. On page 2 of the complete specification, line 28:

"When the box m is full, it may be removed."

The Court: "When the box at m".

(Testimony of William Howard Clapp)

Mr. L. S. Lyon: Yes, "When the box at m". There has been an attempt to say that is a permanent receptacle, and the box is something over to the left-hand side, a separate part which is moved out by pulling the handle, of which this witness' drawing is made. I think the witness should be confined in his testimony, under the law, to what this actually shows; not what he can make out of it after knowledge of the art 50 years later. [1295]

Mr. Foster: We are content with our understanding of the nicety with which the English language is used in this patent, as distinguishing between a box at m, and the receptacle m referred to, and as remarked by the court. Has the court any further questions upon this patent?

The Court: I am not sure that I understand the position of Mr. Lyon. While we are here let us straighten it out. From a mechanical standpoint, Professor Clapp, as I was asking you on Friday, it would not make any difference whether the opening between the snow chamber f in Fig. 1, and the receptacle m were circular, square or rectangular, so long as it permitted the passage of the snow into the receptacle, that is true? A. Yes.

Q. Mechanically it would be exactly the same thing. Now, does it make any difference whether, when you pull at the handle 7, you pull out the box 6 separate and distinct from the closing face of the receptacle m, between the No. 8, and the No. 10? Suppose that from 9 to 10 that was a solid space, and the handle pulled the whole thing out, would that make any difference mechanically?

The Court: Let me ask one—

A. No; I don't see that it would.

The Court: Let me ask you one further question. By your interpretation of the patent, of Exhibit GG, you

(Testimony of William Howard Clapp)

force the ram to complete the pressing apparatus up to the Figure 8 or [1296] beyond toward the Figure 9 in order that you might remove the box by the handle, because if your ram only went, to exaggerate, half way back in the receptacle m toward the point h, you could not possibly pull it out of that separate box?

A. That is true.

Q. So if it were all one face and you pulled it out, then the whole thing would come out, wouldn't it?

A. Yes; and the whole thing could not be drawn out away from the paper with a plunger in the receptacle m.

Q. No; the whole thing could not be drawn out, but the face could be removed, could it not, and be pulled off, and then they could take it out by any means they pleased?

A. Yes; that is true.

Q. Let your ram go back, let the hydraulic plunger reciprocate, and then you just have an opening, don't you?

A. I think I should make myself very clear that this whole drawing is diagrammatic; it is not a detail; it does not show how the thing is constructed. One may infer from the context and the description as to how it might have been done, but one cannot say that that was the way Elworthy intended it to be done.

Q. All right. One further question. You could still have a box, could you not, by having, instead of only the box 6 removable, you could have box 6 and the sides and bottom of the receptacle m all attached together so that you could pull [1297] the whole thing out as a box by permitting the piston to pull the ram back to the point 10 or beyond and then pulling the whole thing out, couldn't

(Testimony of William Howard Clapp)

you? So it would not make any difference how far the ram had extended in the space from 8 to 10, would it?

A. No; I do not see that it would so long as the snow is compressed.

Q. Well, that would depend upon your timing, how much you let out and how much material you had to compress; if you had less, you would not get a full box, box 6 full; if you had more, you would get the box 6 full and you would have some extending outside, wouldn't you?

A. Yes.

Q. So, as a matter of fact it is more or less guess work just what Elworthy intended by his drawings and his specification, isn't it? You could conceivably make several different arrangements?

A. Yes, sir.

Mr. Foster: Is that all, your Honor, on that?

Q. You have referred on Friday to two Slate patents, 1,546,681 and 1,546,682. Will you next please direct your attention to British patent No. 237,681 to Slate for "Method of and Apparatus for Converting Carbon Dioxide into a solid"—that is Defendants' Exhibit EE, tab 28—and point out what is there disclosed?

A. Two views of the apparatus are shown in Figs. 1 and 2, [1298] and sectional views of part of the apparatus in the other figures to Fig. 8. Referring to Fig. 1, the No. 5 designates a snow-forming and pressing cylinder which is open at both ends but which may be closed at the bottom by a quick-sealing cap shown in sectional detail in Fig. 3. Slate employs the same device that he did in his first patent for obtaining a sealed closure, but has a method of opening this seal by having it mounted on a bell crank lever, which in turn is pivotally connected to the frame of the machine or an extension of the frame marked 10 by the pin 53. Referring to Fig. 5, an open

(Testimony of William Howard Clapp)

position of that sealing cap is shown with a block of compressed snow falling out. There is an inlet opening marked 34 on Fig. 3 by means of which the carbon dioxide liquid is brought into the cylinder through pipe 31, shown in Fig. 1, down alongside the cylinder and curving out to permit a valve 33 just before its entrance into the bottom of the cylinder. This valve 33 is mechanically actuated by a lever, or I might say a rod 36 and lever 37, being held normally in closed position by the spring marked 38. The arrangement is—well, perhaps I should describe the piston first.

In Fig. 3 a piston is shown—

Q. You are referring to what figure, Professor Clapp?

A. In Fig. 3 of the drawing, showing a sectional view of the bottom of the snow chamber, a piston is shown marked 18 and having sealing rings, so that Slate refers to the [1299] piston as a moving wall making a sealed connection or a closed connection between the bottom of the piston and the sealing cap.

Slate proposes to use the energy of the liquid carbon dioxide to do work on the piston, but he does not say that he expects it to do all of the work.

An outlet for the carbon dioxide gas that is formed is shown in Figs. 5 to 8 where, through openings in the top of the cylinder, the gas may pass out into a surrounding manifold marked 29 and be carried away by the pipe 30 which surrounds the inlet pipe 31, as described in the last Slate patent. The piston has connected to it a connecting rod 19 which, through a rather strange lever mechanism, is actuated or actuates a crank 26—another connecting rod 26, through the crank pin 25 and a crank arm. I judge from Fig. 2 that 25 refers to the crank as a whole,

(Testimony of William Howard Clapp)

the crank being keyed to a crank shaft 23 which carries a geared connection to a smaller pinion 50 on another shaft, which is turn carries a fly-wheel—

Q. By the Court: But all this complicated machinery over on the left-hand side of the cylinder in this Fig. 1 is just designed to synchronize the various phases of the operation, isn't it?

A. Yes. The intake lever or the lever which regulates the inflow of gas, No. 37, and its connection to the valve through the rod 36 is actuated by a pin marked 39 on the hub [1300] of the crank.

Q. By Mr. Foster: I think, if you will pardon the interruption, Professor Clapp, I think the court's point was this: That these various levers that go to make up the mechanism and the fly-wheels and so on are simply means of synchronizing the opening and closing of the liquid carbon dioxide valve and opening the closure at the bottom of it and converting the compressing cylinder at the proper times in the operation, is that correct?

A. That is the main function. Of course, they do absorb energy. As the piston is received by the carbon dioxide, energy would be stored in the fly-wheel and would be returned as more work was done by the piston.

Mr. L. S. Lyon: If your Honor please, I think I should state, so that your Honor will not dismiss from your mind or have the witness distracted from the subject, that this mechanism here is an inherent and necessary part of this device. It is not just a gas system or anything of that kind. This is what we look at as a perpetual motion machine, and we expect to contend—I do not know what the witness is going to testify to—if necessary, offer evidence to show that this device in its entirety is inoperative and is not a reference for anything.

(Testimony of William Howard Clapp)

I do not believe it was ever made to operate; and we contend it is inoperative. It has a lot of things that have not been described to your Honor yet that it has to do in order to work at all, and it has to do it [1301] through all this complicated linkage that you see.

The Court: That was what I was getting at in my amateurish way. If these things were not inherent functionally so far as the machine is concerned, I was not going to be very much interested, but evidently we have to go into it.

Mr. Foster: Have you completed your answer. Professor Clapp? Have you completed your answer?

A. I have.

Q. Have you completed pointing out the construction and operation of the device as described by this patent?

A. I was looking for a reference which may be in the American Slate patent. Taking up the operation of the device?

Q. Yes; if you please.

A. Referring to the Figs. 5 to 8, 5 shows a compressed block, the pressure on the sealing cap having exceeded the resistance on the toggle mechanism, causing it to open.

The Court: Well, let me see if I understand you. These Figs. 5 to 8 simply show the steps in the process or the cycle of the operation distinctly from all this mechanism over here to the left? A. Yes, sir.

Q. Now, tell me this: Could these same processes in the operation be accomplished by hand or by other arrangements than this complicated arrangement shown in Fig. 1?

A. They could be. In Fig. 6 liquid carbon dioxide under heavy pressure and temperature such that it is

(Testimony of William Howard Clapp)

mainly liquid [1302] is allowed to flow freely into the cylinder, after which it may expand, as shown in Fig. 7, and when the piston reaches the top of its stroke carbon dioxide gas flows out through the openings 28, after which the piston continues its downward stroke, compresses the snow and ejects the block.

Q. By Mr. Foster: Do you find a reference in the specification of this patent to the evaporation of carbon dioxide in liquid form within that chamber in the operations you have just described? My question is this. Professor Clapp: Do you find any reference in the specification of this patent to the evaporation of carbon dioxide in liquid form—

A. Yes, sir.

Q. —within this chamber in the operations you described in your last answer?

A. Page 3, commencing line 44: "At the instant that the sealing cap returns to the cam 39 operates cam lever 37 and link 36 to open valve 33 and allow liquid carbon dioxide to flow freely into chamber 5, forcing piston 18 upward by the pressure of the liquid carbon dioxide to about the position shown in Fig. 6, at which position valve 33 is closed". I think that covers it, does it not?

Q. Would you read the following sentence, too, please?

A. "the cam roller 39 having passed cam lever 37. Piston 18, which has already acquired momentum, continues on its upward path reducing the pressure on the liquid carbon dioxide which thereupon immediately boils, the liquid receding [1303] as it evaporates to supply gas which is expanding and following the piston 18 to the end of its path."

Q. In such an operation would triple point ice be produced within this chamber?

(Testimony of William Howard Clapp)

A. It could be; and I see on the same page, commencing with line 79: "In the process of refrigeration above described considerable portion of the liquid carbon dioxide is converted into a mass of light porous carbon dioxide snow, as illustrated in Fig. 7, while the remaining portion (about one-third) reverts to a gaseous state and is released as described through openings 28." A condition in which about one-third of the material was in the gaseous state would be at or very close to the triple point of the equilibrium diagram.

Q. Would you give a brief summary of this disclosure, please?

A. To summarize, there is disclosed a chamber and mold, a closure lid or cap, means for opening the chamber, an inlet for liquid carbon dioxide, an outlet for liquid carbon dioxide, an outlet for carbon dioxide gas, a pressing plunger and means for operating the plunger.

Mr. Foster: Does the court have any questions on this patent?

The Court: No; I do not believe so.

Q. By Mr. Foster: As I understand you, Professor Clapp, the formation of the carbon dioxide solid and its compression [1304] into a compressed block takes place in the same chamber in accordance with the disclosure of this patent, is that correct?

A. It does.

Q. Will you direct your attention to another Slate patent, 1,643,590, which is Defendants' Exhibit EE, tab No. 18, and since the drawings, Figs. 5 to 8, simply appear to resemble those which you have described in the British patent, will you point out what is different from or added to the disclosure of the British patent to which you have just referred?

The Court: What is this number?

(Testimony of William Howard Clapp)

Mr. Foster: That is 1,643,590, your Honor, tab 18.

A. The description of the apparatus is practically identical with that given in the previous patent. There was one question which one might ask as to whether, with the outlet for the gas at the very top position of the bottom of the piston, that gas would escape completely enough so that on the down stroke one would not be compressing gas as well as snow.

The Court: That was the thing that I was hesitating about.

A. In the American patent, commencing with line 97 on page 3: "The phrase 'reducing pressure in the chamber' as used in the succeeding claims is to be construed broadly as applying to any operative method and means for relieving or [1305] reducing the pressure on liquid carbon dioxide supplied to a chamber under pressure, whether by utilizing the energy of the expansion of gas from the liquid in a pressure chamber to drive or to continue to drive a movable element such as a piston and thus increase the capacity of such a chamber or whether by other means (not illustrated) for releasing or reducing pressure in the chamber into which the liquid carbon dioxide is conducted under pressure, such as a valve controlled passage adapted to be opened to allow the portion of the liquid carbon dioxide which vaporizes to escape rapidly from the chamber while the remaining portion is refrigerated to snow."

As I understand that last statement, that means we might have an opening or openings spaced anywhere along the length of that cylinder and not necessarily at the very top for the exit of the gas.

Q. And would you add to that portion you have read by reading claim 1 of that patent, please?

(Testimony of William Howard Clapp)

A. "A process for converting liquid carbon dioxide into a solid for refrigeration and other purposes, consisting in conducting liquid carbon dioxide into a chamber under sufficient pressure to cause it to remain a liquid while being admitted; reducing the pressure inside the chamber and thereby converting a portion of the liquid carbon dioxide into a snow-like condition; withdrawing the carbon dioxide which has reverted to a gas; and compressing the carbon [1306] dioxide snow into a compact dense mass."

Q. And the whole disclosure of this patent, as I understand your testimony, is to the effect that the carbon dioxide shall be converted to a solid and compressed into a dense block within the same chamber?

A. That is right.

Mr. Foster: The court will note the date of the application is June 10th, 1924. Are there any questions on this patent, your Honor?

Q. By the Court: Well, about the only difference between this American patent of Slate and the disclosures in this British patent, then, is that he is not so keen for this arrangement of the piston 18 and the sealing rings, moving wall and sealed construction using energy of the carbon dioxide to do work on the piston. He kind of hedges on that and thinks that the thing to do is to leave it open to let the gasified carbon dioxide escape; isn't that true?

A. Yes, sir.

Q. This is a cumbersome arrangement in this British patent for the escape of that gas. Would it work?

Well, I guess I am anticipating something. You can wait until cross examination.

Mr. L. S. Lyon: Yes; I think so, your Honor. And I might state, while your Honor has it in mind, that we

(Testimony of William Howard Clapp)

do not agree that the patent describes putting any holes down below the piston. [1307]

The Court: You mean in the Slate patent?

Mr. L. S. Lyon: In the Slate at all, in the American or the British; and if you did, you would never get your piston driven up to the top. There is no other provision shown except this perpetual motion arrangement.

The Court: That is why I asked him whether it would work. I wondered how, under the disclosures of the patent, you could make that work.

A. Well, I do not find in this patent any place that he intends to.

Q. You are speaking of the British patent now, are you? Are you speaking of the British patent?

A. I do not find in the British patent in any place that he intends to operate this mechanism solely from the energy derived from the expansion of the carbon dioxide gas. I do not see any reason why he might not put a belt on the fly-wheel and drive it with a geared motor, slowly, utilizing the energy that he can, effectively, returning it from the fly-wheel to the pressing operation and still have a controlled operation.

Mr. L. S. Lyon: May I ask—

Q. By the Court: In other words, you do not think the fact that he may have devised some kind of a perpetual motion arrangement interferes with the fundamentals of his apparatus; that he did not need to do that to accomplish the purpose of making these blocks; is that your point? [1308]

A. Yes, sir.

Mr. L. S. Lyon: I do not understand the witness testified that the patent anywhere discloses putting a motor on.

The Court: No. I think he said it did not.

(Testimony of William Howard Clapp)

The Witness: No.

The Court: That it could, however, be done. Well, let us let that go until cross examination.

Q. By Mr. Foster: Would you direct your attention next, Professor Clapp, to patent No. 1,631,037, which is tab No. 17 of Defendants' Exhibit EE, on an application filed in October, 1921, and point out what is there disclosed?

A. Fig. 1, your Honor, shows a rather formidable machine, but the elements are relatively simple and are shown quite clearly in the detailed drawings from Figs. 2 to 7.

The Court: What number is this?

Mr. Foster: 1,631,037, your Honor.

The Court: I had a little mechanical operation I wanted to take care of.

Mr. Foster: It is tab 17.

A. This is a machine for pressing boiled garbage. The garbage is brought down into the top of a pressing cylinder marked No. 4 from bins or receptacles A or B, through pipes marked 22, and there are control valves 24 for permitting the material to enter at the top of the cylinder 4 from either side at will. A good view of the pressing cylinder [1309] is shown in Fig. 7. There is shown also a closure cap which may be let down on the top of the cylinder, this closure cap being marked 12 and shown in full outline in Fig. 6; and it will be seen that the larger annular area of that cap fits on the top of the cylinder, as is shown in Fig. 1, where a small part of that closure cap is shown sectioned. This cap is provided with multiple apertures which connect with an annular groove 31 in the cylinder 4 by means of which liquid

(Testimony of William Howard Clapp)

which escapes from the top of this mass may be withdrawn through pipes shown as 33 and 34 in Fig. 1. This cap is hydraulically actuated by a cylinder—through a cylinder and piston marked 10 and 11, respectively, shown in Fig. 6. There is also shown a partial enclosure or fence in Fig. 2 marked 21 which is actuated by small cylinders—I think those are 41—placed on either side and above the gate. This gate prevents the material which is allowed to flow in under the closing cap from escaping and directs it into the top of the cylinder 4.

There is shown a pressing ram marked No. 3, which likewise is perforated on its upper face, carrying a perforated plate marked No. 5, and means are provided by which the liquid which escapes at the bottom of the material may flow out through openings 35 in this ram and be withdrawn through openings in the end of the cylinder marked 36 to pipe 38, as shown clearly in Fig. 7. This piston is hydraulically actuated, as shown in Fig. 1, through a cylinder 1 and an [1310] actuating piston No. 2.

The method of operation consists in raising the closure cap, lowering the side gates, opening the valves 24 in filling the cylinder 4 with material, closing the closure cap and pressing against that cap with the ram No. 3, after which the operation may be continued, the ram 3 and the closure gate 12 rising together for the ejection of the compressed material.

To summarize, there is disclosed a chamber and mold, a closure lid, means for opening the chamber exit, means at the top and bottom for the escape of fluid and any gas in the material, and a pressing plunger hydraulically operated acting in the chamber.

(Testimony of William Howard Clapp)

Q. By Mr. Foster: Referring to Fig. 2, Professor Clapp, I notice that there is a piston 58 just above that pressing plunger 3 when it is in the uppermost position. What does the patent describe as the purpose of that piston 58 and cylinder 59? Do you find it?

The Witness: May I get that question again?

(Question read by the reporter.)

Q. Do you find the piston, Professor Clapp?

A. I am not sure that is the one that you refer to. Oh, yes. That is a means also shown in one of the previous patents to use a ram to thrust the material one side after it has been ejected.

Q. In other words; as the compressed block of material [1311] is raised upon the pressing plunger, as the closing head is moved from its chamber-closing position, then this hydraulic ram operation pushes this compressed block off of the plunger, is that correct?

A. Yes, sir.

Q. If in this apparatus of the patent an inlet is provided for the supply of liquid carbon dioxide, would it be adapted for the solidification of carbon dioxide by expansion and the compression of solid carbon dioxide into blocks? A. It would.

Q. That solidification of carbon dioxide and its compression into blocks taking place in the same chamber?

A. Yes, sir.

Q. Would you next direct your attention to patent No. 1,659,431 of Josephson—which is tab 19, your Honor, of Defendants' Exhibit EE—and point out what is there disclosed? [1312]

A. Josephson describes a method for freezing liquid carbon dioxide directly to ice, while under sustained pres-

(Testimony of William Howard Clapp)

sure, very great pressure. He says that he has noticed that liquid carbon dioxide, as distinguished from water and most liquids, is very highly compressible, and states, page 1, commencing line 62, that under a liquid pressure of 150 pounds to the square inch, the ice will have a specific gravity practically the same as that of water. That would be about $62\frac{1}{2}$ pounds per cubic foot, "whereas the same method with the pressure kept up to 850 lbs. to the square inch will give a density of 86 lbs. to the cubic foot, and with sufficient pressure, say, somewhere between 1500 and 2500 lbs. per square inch, the density of the ice can be carried up to 95 lbs. or even 100 lbs. or more per cubic inch." The entire layout, which is shown in this figure, the only figure, is diagrammatic, and more elaborate in the treatment for reducing temperatures than we have seen in any other of the patents, there being water and brine, ether, coal, nitrogen gas, and other things possibly, used in the cooling of the material.

If we may start with the liquid coming out of the last counter-flow condenser, through a pipe 38, and going through a manifold, through a valve 62, the manifold being 39, and being allowed to flow into these pressing chambers, under a pressure of from 50 to 60 atmospheres, and a temperature of about minus 50 degrees Fahrenheit, the chambers are shown here as 41, the inlet pipe as 40, and valves connecting each chamber as 40-a.

Means are provided so that liquid carbon dioxide can escape at the top of the chamber through pipes with valves marked 51, going to the manifold 53, where they may be returned to the system, or used to cool the incoming gases. These cylinders 41 are described as having closure caps of the quick sealing type, that is, of the breech-block type of interrupted thread mechanism, which

(Testimony of William Howard Clapp)

closes the bottom of each cylinder, and are actually diagrammatically illustrated. The material which enters the chamber is further compressed, after any gas has been allowed to escape, and the cylinder is full. In the manifold entrance to these cylinders a valve, 62, is shown, and directly under the valve is a pipe connected with a small high pressure piston at the cylinder marked 60, which has an inlet through a valve marked 61, above the valve 62, an exit into the manifold below 62, so that when the cylinder has been filled with liquid at from 50 to 60 atmospheres, valve 62 is closed, the plunger in 60 is started, valve 61 is opened, and material is withdrawn from above the valve, and delivered below the valve, to bring the pressure up somewhere in the neighborhood of between 1500 and 2500 pounds.

The medium which surrounds these chambers is described as ether, or other suitable material, which is cooled in very cold nitrogen gas, described as being from 200 to 300 degrees Fahrenheit below zero, so that the material is [1314] frozen under what he calls a sustained pressure. The patent also states, page 3, commencing at line 24:

"It will be evident that while I have shown one apparatus whereby my method may be practiced, the desired constant or follow-up pressure may be applied in other ways, as, for instance, by pistons forced downward upon the liquid in the ice chambers 41 after the chamber has been filled and cut off; the removable breech-blocks may be held in any desired way as, for instance, by hydraulic pressure; and the freezing refrigerant may be supplied by any suitable refrigerating machine instead of by the expanded nitrogen product as above described."

The Court: What does he mean, for instance, "by pistons forced downward upon the liquid"?

(Testimony of William Howard Clapp)

A. Your Honor, I take it, that instead of using the means which he has shown there which axially seal the high pressure cylinder 60, that he might have this follow-up pressure by use of the pistons in these cylinders.

The Court: It would not be liquid at the time that action was applied, would it; it would be solidified or gasified?

A. No, it was the interpretation that I got from the patent that he intends to run this liquid in at a pressure of 50 to 60 atmospheres, withdrawing any gas that might be present, and then immediately boosting the pressure up by closing the valve 62, opening 61, to 1500 or 2500 pounds [1315] per square inch, holding it in what he calls sustained or follow-up pressure until the material has solidified.

Mr. Foster: The first sentence in the patent, I think, will help your Honor.

The Court: You mean the first starting "My present invention"?

Mr. Foster: Yes, the first sentence in the first paragraph.

The Court: That was what I meant, yes.

Q. By Mr. Foster: You referred, Professor Clapp to an inlet in each of these cylinders 41 for supplying liquid carbon dioxide thereto; then you referred to this outlet valve 51 in the pipe 50. Is it in accordance with the teachings of this patent to withdraw carbon dioxide gas through that pipe 50 and valve 51?

A. Yes, if any is present.

The Court: I wish, Doctor, that you would run through this briefly again. I had not read any part of it before, and did not understand it. I couldn't see how the thing was going to work. Maybe with this first sentence

(Testimony of William Howard Clapp)

I may understand it. It was entirely unintelligent all the way through; I did not understand it.

A. If I may start with the liquid carbon dioxide under a pressure of 50 to 60 atmospheres, minus 50 Fahrenheit, flowing through the pipe 38, valve 62, manifold 39, and being distributed through inlets through pipes 40 into each [1316] of these six solidifying chambers and to exit pipes shown alongside the inlet pipes, and the valve marked 51, through which the gas, should any form during the running in of the liquid, may be removed and returned to the system through the pipe 53?

The Court: Each of the chambers has its own valve?

A. Yes. Then after a chamber has been filled, a further boosting of the pressure by closing the valve 62.

The Court: You do not need to go any further. I have caught up with myself.

Q. By Mr. Foster: Will you briefly summarize the apparatus disclosed in the patent, please?

A. To summarize, there is disclosed a chamber, a mold, a closure lid, means for opening the chamber, an inlet for the liquid carbon dioxide, an outlet for the gas and an alternate method, a pressing plunger working within the cylinder, and means for operating the plunger.

Q. You referred to the breech-block type of closure for each of these solidifying and compressing chambers, 41. Is it correct that that is a type of closure, well known in the art, for providing a gas-tight seal for the walls of the chamber, and permitting rapid opening and closure of the walls?

A. Yes, as is shown in a number of the patents.

Q. And it is used in the mechanical art, in a great variety of devices, where a good seal and a rapid opening [1317] are required?

A. Yes.

(Testimony of William Howard Clapp).

Q. In this patent to Josephson, solidification of carbon dioxide and its compression into blocks, takes place in the same chamber? A. Yes.

Q. Would you direct your attention, please, to patent No. 1,659,434, issued in 1928 to Martin, and point out what is there disclosed?

A. The Martin patent has for one object the recovery of as large a part of the carbon dioxide snow, which is produced, as is possible, and means for preventing it being swept away into the exhaust and melted. For this purpose he uses a relatively large snow chamber, which he describes at $2\frac{1}{2}$ by 3 feet in diameter, and $3\frac{1}{2}$ by 4 feet high. Affording ample space for quite an expansion.

Mr. L. S. Lyon: If your Honor please, I think I should object to testimony on this patent under the rule that two experts cannot interpret the same patent. This is cumulative. Mr. Martin himself has discussed this patent. I don't see how this witness, as an expert, can help your Honor, after you have heard from the man himself who is the patentee explain the patent.

Mr. Foster: Mr. Martin's reference to it was only as an illustration, a drawing, which was the drawing of the device, the subject of his testimony, as prior use, prior [1318] invention. If it involved any invention, it was not as to the text of the specification. The reference to the patent will require only a very few minutes.

The Court: My recollection of it is that Martin's testimony was a bit sketchy. Let us try to avoid any duplication, and if there is duplication we can take it subject to a motion to strike.

Mr. Foster: Continue.

(Testimony of William Howard Clapp)

The Court: As I remember, it had no gauge for the pressure, and it was somewhat guesswork, by the amount of gas escaping from the apparatus.

Mr. Foster: I think probably the witness can answer that better.

The Court: There was a safety valve into the outer cylinder? A. Yes, there was a safety valve.

The Court: And it couldn't always operate, because it froze up?

Mr. Foster: I think that is true of any outlet valve to the carbon dioxide tank.

A. We have a safety valve on the Stastiney device. It hasn't frozen up.

The Court: It kicked up a little the first time.

Mr. Miketta: I think this patent is also shown in the exhibit introduced by the plaintiffs, Plaintiffs' Exhibit No. 6, in connection with Dr. Jones' testimony. [1319]

Q. By Mr. Foster: Will you continue with a brief discussion of this patent?

A. The cylinder is a double cylinder, with a jacketed space provided between the walls, and the top of the inner cylinder or snow chamber proper is covered with a screening device, reinforced on either side by a galvanized wire mesh screen, which he describes as about three-mesh, being very rigidly attached through suitable angles and clamps to the periphery of the inner cylinder.

There is a closure door marked 29, which the construction shows to be let in through both the outer and into the inner cylinder, the door frame, if we may call it that, 30, being described as welded to both members, and clamping devices are indicated through 6, and screw 6a, by means

(Testimony of William Howard Clapp)

of which the door may be released from its closed position. The inlet for liquid carbon dioxide is shown in Figure 3, and through the door, near the bottom, the idea of the patent being to get a relatively large space into which this gas may be allowed to flow and expand without interference from external sources of friction, so as to obtain as rapid cooling as possible. While snow builds up on the screen, and may entirely clog it, by rapping on the cylinder it is, of course, dropped down. There is an outlet for the carbon dioxide gas, as shown by a dotted circle in Figure 3, near the bottom of the outer cylinder, and also indicated in Figure 1 by the outlet connections marked 11, 12, 13, and [1320] so forth, these connections being made of a construction which would allow swiveling of the pipe, because the plan was to set this dotted cylinder on platform scales, and when a great amount of snow had been accumulated to shut off the inlet and stop the snowing.

Q. That was for the purpose of preventing the filling of the device with a quantity beyond the limit regarded as safe, and to terminate the filling, regardless of the internal pressure?

A. That is true. I was a little bit curious to determine what the capacity of the device might be, under the assumption that it was a 30-inch cylinder—

Q. I think that is on page 1, lines 35 to 40.

A. Yes; that it was a 30-inch cylinder, and $47\frac{1}{2}$ inches high, which I got by measuring the height on the basis of the scale given by an assumed diameter, if it were completely filled with snow. Page 2, commencing line 28:

"In the apparatus shown, 400 pounds of snow is about as much as is safe to accumulate in one run, since ma-

(Testimony of William Howard Clapp)

terially greater amounts will result in clogging the whole apparatus."

And of this 400 pounds, so as to completely fill the chamber, it would have a density of weight of about 16.3 pounds per cubic foot, whereas, if it filled a chamber two-thirds full with suitable material, logically it would weigh three-half times as much, or about 33.4 pounds per cubic foot. [1321]

* * * * *

Mr. Morris: I understand the admission of genuineness now applies to all the documents which we submitted to them, and particularly—if I may use "particularly" with any such sense—to the licenses and sub-licenses exhibited to counsel; that is, I understand their admission of genuineness is not confined to the documents referred to in today's request for admissions.

The Court: No. No; my understanding of it, they were all combined in that black book you have there and that those were the ones submitted to them, and you vouch for the authenticity and they accept your vouching and raise no question as to the authenticity.

Mr. Miketta: That is correct, your Honor.

Mr. L. S. Lyon: And therefore the plaintiff admits each of the requests that were served this morning, the answer to each of those requests is in the affirmative.

The Court: Very well. Let this, then, be filed and let the clerk make a record of this document at this time, that plaintiffs admit the answers are affirmative to all of those requests. And that save a lot of time.

Mr. Foster: Thank you, your Honor. May we proceed with the Professor?

The Court: Yes. [1325]

WILLIAM HOWARD CLAPP,

recalled.

Direct Examination

resumed.

The Court: Now, let's see where we were.

Mr. Foster: Professor Clapp was referring to the Martin patent 1,659,434, which is tab No. 20 of Defendants' Exhibit EE.

The Court: I remember now.

Mr. Foster: And he had, just before the noon recess, referred to the quantity of snow formed in that snow chamber of that patent.

Q. Now, would you continue with your description of what is disclosed in that patent, Professor?

A. I believe I covered the inlet, the outlet,—

Mr. Foster: Yes.

A. —and position of the safety valve. Some question of—on the assumption that the tank held 400 pounds of snow, which is described in the patent, and that it might be full or two-thirds full, what the density of that loose snow might be, I made some calculations on the strength of the outer chamber. Assuming, within the dimensions given in the patent, a diameter and taking on the measurements of the drawing, which I understand is not reproduced exactly to scale, the thickness and height, etc., and I find that the upper cover marked 41, reinforced with channels spaced, as near as I could, at the distances apart shown in the drawing, that that cover, when pulled securely around the outer flange, [1326] is adequate to withstand an internal pressure of 100 pounds per square inch, using the same factor of safety that is used in boiler construction, that is, using a factor so-called of 5,

(Testimony of William Howard Clapp)

which would mean that the maximum stress would not exceed one-fifth of the rupture stress of the material.

The bottom member is even stronger, as it has two steel plates, one for the bottom of the inner tank, one for the bottom of the outer, the latter being preferably spot-welded to the channel. With regard to the screen, the dimensions and proportions generally do not furnish enough information upon which an intelligent calculation can be made. If the screen were kept in a tight drawn position, the stresses would be very much greater than if it were allowed to bow out and make something of an angle with a horizontal plane at the point of juncture with the line of the inner cylinder.

I did make some calculations on the assumption that it was given, as, I believe, 4 mesh. Yes, $\frac{1}{4}$ -inch mesh, which would be three openings per inch. Assuming one-eighth inch diameter in both the inner and outer wall protection under that filter cloth, there would be required an angle there at the juncture of some 12 or 15 degrees in order to withstand a pressure corresponding to the so-called triple point.

Q. Would you briefly summarize the disclosure of this patent?

A. To summarize, there are disclosed a snow chamber, a [1327] door for access to the chamber, means for opening the door, an inlet for the liquid carbon dioxide, and an outlet for the carbon dioxide gas.

Q. Professor Clapp, would you turn your attention to Martin patent 1,659,435, which is tab 21 of Defendants' Exhibit EE, which application was filed December 7, 1926, and point out what is added to the disclosure of the earlier Martin patent by this patent, and in that connec-

(Testimony of William Howard Clapp)

tion would you first read the very first paragraph of the patent?

A. "My present invention concerns large quantity production of solidified carbon dioxide in the form of so-called carbon dioxide snow and compression thereof to form dense, structurally coherent blocks such as are now going into extensive use for refrigeration and similar purposes."

Martin tells of the advantage of what he claims as a fact, that if the liquid is cooled until below its critical pressure, then a much greater quantity of such can be produced, as described on page 1, commencing line 41; and Martin endeavors to create a long chamber with the inlet at one end.

Q. What is the number of the inlet?

A. A long chamber, inner snow chamber, being No. 10, with an inlet marked 17, the nozzle controlled by a valve 18, from a source of liquid carbon dioxide; and he endeavors to provide a quiet space into which this material may freely expand and cool without interference, so as to get the [1328] maximum cooling effect due to the separation of the molecules of the gas.

The waste gases from the snow chamber escape at a screen in the upper part of the right-hand end of the snow chamber in Fig. 1, marked 23. They are allowed flow around the outer walls of the snow chamber; in the jacket space, there is a baffle or division 26 which prevents the outgoing gases going directly into the exit No. 11. Martin describes a snow nozzle, as shown in Fig. 2, described at page 23, line 90, with a Venturi-shaped opening, which engineers will recognize as, when being properly proportioned, will permit of expansion of the material with the

(Testimony of William Howard Clapp)

least amount of frictional resistance, his idea being as expressed on page 4, commencing line 5:

"The preservation of the liquid cone and further increase of snow yield is promoted by having the snow tank, 10, into which the nozzle discharges. For expanding, say, 1000 lbs. of liquid per hour, it may be 20 feet long by 4 feet in diameter."

The snow chamber is shown as inclined, as he states, on page 4, line 45:

"The snow chamber is shown as inclined for the purpose of facilitating clearing out of snow at the far end of the chamber, in a bin, 24, to which access may be had through a door, 25."

Q. Would you read the next sentence too, Professor?
[1329]

A. "The snow chamber may be and preferably is, provided with agitating scrapers for clearing the snow that collects on the inner surface of shell 10, as described in a companion application of even date herewith, and the exit, 25, may be the path of movement of a compressor as shown in said companion application."

To summarize, there are disclosed a chamber, a closure door, which would probably be manually operated, an inlet for liquid carbon dioxide, an outlet for carbon dioxide gas, and some sort of a compression means which might be exerted along the path of exit of the collecting chamber 25.

Q. For the presence of this pressing plunger, as set forth in the chart you prepared, Defendants' Exhibit FF, you are referring to the statement you read on page 4 that the outlet of the snow chamber may be in the path of movement of the compressor, is that correct?

A. Yes, sir.

(Testimony of William Howard Clapp)

Mr. Foster: Does the court have any questions on this patent?

Q. Will you, somewhat out of order, refer to Martin patent, another patent to Martin, 1,887,692, which is tab 24 of Exhibit EE, and point out what is there added to the disclosures of these prior Martin patents?

A. The patent states:

"It is related to the invention set forth in the companion application, Ser. No. 153,064, now Patent No. [1330] 1,659,435. granted February 14, 1928, in that it concerns large quantity production of solidified carbon dioxide in the form of so-called carbon dioxide snow and compression thereof to form dense, structurally coherent blocks such as are now going into extension use for refrigeration and similar purposes."

Beginning page 1, line 33:

"My present invention relates more particularly to means for compressing the snow into blocks, preferably in an extension of the extremely cold snow-forming chamber whereby loss of the carbon dioxide gas is minimized, and the snow is preserved in the cold atmosphere, insulated from heat until after it has been compressed into blocks,"

Q. Will you complete the sentence?

A. "in which form it is in relatively stable condition for extrusion into the open air for use as a finished commercial product."

He describes tamping means, which are illustrated in Fig. 1, which the patent states may be operated either manually or by some form of machine power.

Fig. 1 shows the collecting chamber, the tamps marked 30 and a means indicated for their reciprocation. In Fig. 2, a sectional elevation of chamber 20 is given, into which

(Testimony of William Howard Clapp)

the snow enters at right angles to the plane of the paper, and drops in front of the plunger 22. In the left-hand view the plunger is shown in full sectional lines as being retracted [1331] and opening from the hopper 20 into the pressing chamber, and is unobstructed, while in the right-hand view the plunger has moved over to a position shown in the dotted lines, with a block of compressed snow at the dotted vertical line there crossed by the dash on Fig. 22.

There is also shown a lid or cover, which is shown as being advanced with the piston in some way, although the cover has proceeded further than the piston in its stroke, and in this position has closed off the opening, while the plunger has possibly completed its stroke. The patent states that for the purpose of holding a pressure against which the plunger operates, page 1, commencing line 92: [1332]

"Preferably, one formed block serves to sustain the thrust of the piston on the next block, and the piston acts both to form and eject blocks."

Also, page 2, commencing line 49:

"For compressing the first block, a plug or other abutment must be used to sustain the pressure of the plunger against the snow, but thereafter the first block, x, may be pushed to the position x' so that each formed block affords a compression abutment for each succeeding block compressed by the plunger. I prefer to provide inwardly projecting fingers, such as 27 at intervals about the cavity, at a point registering with the rear surface of the second block. When in the projected position as shown in Fig. 2, they serve to sustain part of the thrust pressure

(Testimony of William Howard Clapp)

of the piston, and they may be utilized to assist in maintaining separation of blocks x and x'."

Mr. L. S. Lyon: If your Honor please, I failed to hear—I don't know for sure what the witness designated as the cover, which he referred to in his testimony. I did not get that number.

Mr. Foster: Perhaps I can bring that out, Mr. Lyon.

Q. I note that reference is made, Professor Clapp, page 2, from line 40 to 48 to a valve-like plate, which remains in a closed position, cutting off escape of the snow, and serves as a top wall for the compression. That is the dotted line shown in Fig. 2. Will you describe to [1333] the court where that appears in the drawing?

A. Yes. The cover or slide is shown in Figure 23.

Q. Numeral 23 in Fig. 2?

A. Numeral 23 of Figure 2, and the dotted extension of that section cover represents his forward position, completely covering the opening.

Q. Do you find that alternative means are stated in the patent to be capable of use in actuating the plunger? I call your attention to page 2, lines 35 to 38.

A. Yes, commencing on line 35.

"is closed at the other end by head 22, reciprocated by a power cylinder, screw or other suitable motor means."

To summarize there is disclosed—first, I will say reference is made to an expansion nozzle, beginning at page 2, line 22:

"The expansion nozzle, as also the precooling super-compression and follow-up pressure on the supply of the liquid to the nozzle, breaking up of the snow deposited on the walls of the chamber, etc., may be set forth and claimed in said companion applications."

(Testimony of William Howard Clapp)

And for exit of gas, beginning line 11, page 2:

“for circulation of the waste carbon dioxide gas which has an outlet through screen 7 near the discharge end of the chamber.”

This description was concerned principally with the pressing means, and I think quite obviously refers to the [1334] preceding patent.

Shall I finish my summary?

Q. I think you barely commenced, Professor, and then interrupted it to point out the inlet and the outlet.

A. Yes. Well, to summarize, there is disclosed a snow-forming chamber, a cover or lid closing the chamber, means for opening, a supply inlet for carbon dioxide gas—it is liquid carbon dioxide, an outlet for carbon dioxide gas, a pressing plunger, and means for operating the plunger.

Q. Inasmuch as this Martin patent discloses a closing member for closing off the snow chamber 20 from the compressing chamber 21, in addition to the closure of the snow chamber effected by the piston itself, as in Fig. 2 of the patent in suit, would you say that the snowing operation could be performed continuously in this Martin apparatus while the pressing operation is performed intermittently?

A. Yes, sir.

Mr. Foster: Did the court have any question on this patent?

The Court: Read that last question again, please.

(Question read.) A. Yes, sir. [1335]

Q. By the Court: Well, you mean by that, that the snowing operation could be carried on independently of the compressing operation?

A. Yes, sir. I base that—

(Testimony of William Howard Clapp)

Q. How do you take the snow out; just take it out from below without pressing?

A. Yes; with the closure lid 23 closed, during which time we could be snowing, snow may be pressed forward and ejected, that is, it does not show the plunger 22 and the cover 23 is operating together. They have not traveled through the same distance, at least, as the piston advances.

Q. What other purpose is the cover for?

A. To close off the chamber, the patent states, and to make a top wall for the pressing chamber during the pressing operation.

Q. By Mr. Foster: Would you direct your attention next, Professor Clapp, to the Voightlander patent No. 1,726,373, which is tab No. 22 of Defendants' Exhibit EE, and point out what is there disclosed?

A. This is a device for pressing water out of laundered articles without too much injury to the fabric; and it consists of a cylinder 1, having a bottom 3 described as welded to the cylinder, a quick removable cover plate 5—no; 7, having the interrupted threads or breech-gun type of mechanism, as illustrated in Figs. 5 and 6. There is another platen, we might call it an additional closure head, 18, operated by [1336] a piston in cylinder 15 located above the pressing cylinder by means of which the cover plate may be raised when it is given a slight turn so as to free it from the interlocking threads, and in the raised position material may be charged into the container. There is a bottom plunger 41. Both this plunger 41 and the platen 18 are shown with perforations or holes through which, the lower one for water to drain through and to be carried out at the bottom by a drain pipe 42

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controlled by a valve 43. After the water has been pressed from the article, compressed air is admitted through valve 47, pipe 46, to the entrance shown dotted above the platen 18 which was described as having perforations and this air passes down through the material and out through pipe 44 and 45 which is described as being connected to a vacuum line. I believe that describes the—

Q. Would you give us a brief summary now of the machine disclosed?

A. There is disclosed a pressing chamber, a closure lid or head, means for raising the closure lid, a supply or inlet for compressed air, an outlet for the same, also an outlet for water, a pressing plunger, and hydraulic means for moving both the plunger and the upper platen.

Q. Is my understanding correct, Professor Clapp—I am referring to Fig. 1 of this patent, where the entire device is shown—is my understanding correct that when the operation of the device is completed, the patent instructs that this [1337] quickly removable head 7 shall be removed and the closure head 18 elevated out of the chamber and the compressed material in the chamber moved upwardly through the open end of the chamber while supported in the chamber 41, is that correct?

A. That is right.

Q. And it is clearly taught by the patent, is it, that the closure head 18 may be moved upwardly in the chamber above this inlet 46; is that true? Do you see where the inlet 46 comes into the chamber as shown by dotted line?

A. The pipe inlet 46?

Q. I beg your pardon? A. The pipe inlet 46?

Q. Yes. A. Yes. Yes; that is true.

(Testimony of William Howard Clapp)

Q. And that closure head 18, according to the teaching of the patent, may be moved into the chamber above that gas inlet, is that correct? A: Yes; that is right.

Q. If that plunger head 18 of this Voightlander patent is moved in the chamber above that fluid inlet 46 and liquid carbon dioxide is supplied to the chamber through that fluid inlet 46 would this device be adapted for the solidification of carbon dioxide by expansion and the compression of the solid carbon dioxide into blocks in the same apparatus?

A. By closing off the drain pipe—I don't know as it [1338] is necessary to even do that. There is no reason why you should not have two outlets for gas and one outlet for liquid carbon dioxide.

Q. What is your answer, then?

A. My answer is certainly.

Q. And in that operation if the valve 43 in the line 42 is open and the valve 45 in the line 44 is open, the gas could escape through both of the lines? A. Yes, sir.

Q. And is that what you meant in your last answer?

A. Yes, sir.

Q. And this plunger 41 is constructed so that the carbon dioxide gas can pass around it to those gas outlets, is that correct? A. That is true; yes, sir.

The Court: Would you read that last question?

(Question read by the reporter.)

Q. By the Court: In other words, it doesn't make contact with the shell?

A. Yes, sir. It is shown as not making contact.

The Court: I beg pardon?

A. It is shown as not making contact.

The Court: Yes; it is so shown.

(Testimony of William Howard Clapp)

Q. By Mr. Foster: In addition, that pressing plunger 41 has a —pressing plunger 37. The number does not appear on that figure. But at any rate, the pressing plunger on the [1339] bottom of the chamber has a perforated disc 41 on it, in accordance with the teaching of this patent, doesn't it, Professor? A. That is right.

Q. And those perforations connect with troughs in the piston to permit the free passage of fluid past the piston?

A. Yes, sir.

Mr. Foster: That is described, your Honor, on page 2, about lines 16 to 26.

Q. And in the operation of that apparatus in the manner you have described, admitting liquid carbon dioxide through the fluid inlet described in the apparatus and withdrawing the carbon dioxide gas through the fluid outlets that are described in the patent, we would be able at the completion of the compressing operation to eject the block of compressed carbon dioxide upwardly through the open end of the solidifying and compressing chamber. Is that correct? A. Yes, sir.

Q. In doing those operations that would operate both the pressing plunger and the closing head by hydraulic means, is that correct? A. Yes, sir. Yes.

Q. Now, will you direct your attention to the British patent No. 263,992, issued to Haynes, and tell the court what is there presented?

Your Honor, that is not in your book, I fear. It is in [1340] evidence as Defendants' Exhibit M, and I have an extra copy of it here which you may desire to insert. Your Honor will recall, I think, the circumstances under which this was admitted. It was referred to by Mr.

(Testimony of William Howard Clapp)

Martin, and particularly the diagrammatic sketches, as being given to him.

Mr. L. S. Lyon: May I see this exhibit?

Mr. Foster: Do you have a copy, Mr. Lyon? I shall lend you a copy if you haven't.

A. This patent is concerned with a method of producing relatively pure carbon dioxide, making use of pure oxygen or gas with high oxygen content, using carbonaceous fuel and a carbonate of some sort.

The whole diagrammatic representation makes use, elaborate use, of counterflow of the heat both in the warming up of the product as it passes down through the rotary member No. 6 to the discharge of 5 and the warming up of the gases or the extraction from the product of heat by the gases cooling as it passes. And we are concerned, I think, only with the snow chamber which is shown at the bottom of the right-hand part of the diagram, and all that reference of which is contained in a short paragraph which I will quote:

"From heat exchanger"—

Q. Now you are reading from page 6, line 80, is that correct?

A. Page 6, line 80: "From heat exchanger coil 35a the cooled liquid passes to valve 36 and is expanded in a suitable [1341] snow tower 37: and a substantial portion or approximately 50% is converted into solid carbon dioxide, which may be allowed to fall into a suitable press 38 and is compressed into blocks or ejected, or both. The unsolidified portion of the liquid passing through valve 36 changes to a gas and passes through the porous walls 39 of vessel 37 to pipe 40 and heat exchanging coil 41. Here the cool gasses are reciprocally warmed at heat exchang-

(Testimony of William Howard Clapp)

ing relation with coil 35a, previously described, and passes into pipe 42 at substantially atmospheric pressure."

There is described there a snow chamber, an inlet for liquid carbon dioxide gas—for liquid carbon dioxide, an outlet for carbon dioxide gas, a pressing plunger, and in the diagram, mechanical means for operating the plunger.

Q. Would you for the purpose of one question turn your attention back to patent 1,104,920, which is the Osborne patent and which is tab No. 11 of Defendants' Exhibit EE? Do you have that patent before you? I want you to direct your attention to the drawing.

A. Osborne?

Q. Yes. Professor Clapp, if openings 13 in the apparatus of this patent were closed and liquid carbon dioxide were introduced through the pipe 15 at the upper end of the device, would this apparatus be adapted for the solidification of carbon dioxide by expansion and the compression of the solid carbon dioxide into blocks in the same apparatus? [1342]

A. It would.

Q. Now, will you direct your attention to the drawing in the Stastney patent, 1,288,255, which is tab 12 of Defendants' Exhibit EE? Do you have that drawing before you?

A. Stastney?

Q. Is the apparatus illustrated and described in this patent adapted for the solidification of carbon dioxide by expansion and compression of solid carbon dioxide into blocks in the same apparatus?

A. You are referring to the Stastney?

Q. Yes. A. We showed that it was.

(Testimony of William Howard Clapp)

Mr. Foster: The model which was demonstrated this morning, and which I will ask be marked as Defendants' Exhibit—II, Mr. Clerk?

The Clerk: II.

Mr. Foster: We have had photographs made of that model. A set has been delivered to plaintiffs' counsel. I would like the clerk to mark that for identification as Defendants' Exhibit JJ-1, 2 and 3, No. 1 being the view which shows the disassembled apparatus with the top plate, No. JJ-2 being the photograph showing the cylinders open and the piston balanced on the top of the cylinders, and JJ-3 being the photograph of the assembled device, and JJ-4 being a bottom view of the device.

Q. Directing your attention to the photographs, [1343] Defendants' Exhibit JJ for identification 1 to 4, were these photographs made under your direction, Professor Clapp? A. They were.

Q. And have you compared the photographs with the model, Defendants' Exhibit II, which was demonstrated in court here this morning? A. I have.

Q. Are they photographs, actual photographs correctly portraying that model? A. They are.

Q. Will you point out to the court the dissimilarities and differences as regards the model illustrated by Defendants' Exhibits JJ-1 to 4 and the device illustrated and described in the Stastney patent?

A. I might say that Mr. Foster asked me to pick out one of these patents with the idea of demonstrating that on such a model of such a patent solid carbon dioxide blocks might be produced. I chose the Stastney patent because I could make it out of pieces of old pipe. I made

(Testimony of William Howard Clapp)

a sketch and took it to a manufacturer in Pasadena, out on East Colorado Street, and he built the device.

Looking at Exhibit JJ-2, there is shown an inner cylinder—

Mr. L. S. Lyon: If your Honor please, in connection with the last testimony of the witness, may we have the sketch that the witness made to have this device made from?

Q. By Mr. Foster: Was it a finished sketch or drawing, [1344] Professor Clapp?

A. Well, just a rough sketch. In part I told him what I wanted.

Q. And that the device was to be made, as I understand it, out of pieces of pipe, is that correct?

A. That is right.

Mr. L. S. Lyon: Do I understand the witness can't produce the sketch? He has testified as to a sketch. If he can produce it—

Q. By the Court: Did you destroy the sketch or do you still have it? A. No, sir; I still have it.

Q. Will you bring it in sometime? A. Yes.

Q. By Mr. Foster: You do not have it with you, do you, Professor Clapp? A. No; I do not.

Q. Will you continue with your answer?

The Court: Start over again, so I do not get mixed up.

A. There is shown in the photograph marked for identification JJ-2 an inner cylinder 6.

Q. By Mr. Foster: Is that shown in the Stastney patent?

A. It is. Concentric with that an outer cylinder marked 7 in the patent and on the photograph.

(Testimony of William Howard Clapp)

Q. May I hand you a copy of the drawing of the Stastney which does not have the claims pasted on it the way it has in [1345] your copy?

A. Yes. A base plate marked 13 on both to which the inner cylinder is attached. That is a cover for the bottom of the cylinder. And the outer cylinder is shown as a part of the base plate frame member 9.

As a matter of cheapness of construction, we have extended 13, welded both inner and outer cylinders to it. There is shown in the patent an inlet for compressed air to raise the plunger 14 and an outlet for the same to lower the plunger. These openings are shown in the bottom view, the inlet 16 being the one that was used and 17 being closed with a plug because it is just as easy to let the air out of the same hole.

The Court: The reference is to JJ-4.

Mr. Foster: Thank you, your Honor.

Q. By the Court: You use that 16 for two purposes, then?

A. Yes, sir. There is shown a pressing piston marked 14 on JJ-2 and JJ-1 resting on the top of the cylinder and the cover of which has been removed. There is also shown in JJ-1 the cover 18, an outlet valve 20, which has been placed to one side, and a cross inserted there so that we might use a safety valve on one member and a gauge on the other opening. There is shown a gasket and this cover has been made to close both the inner and outer cylinders, because the patent shows the jacket space as being integral with inner and outer cylinders, and this is a cheap construction and we wanted to [1346] show that the pipes entered these cylinders as disclosed in the patent.

(Testimony of William Howard Clapp)

Q. By Mr. Foster: In both the model and in the device of the patent, both the inner and outer cylinders 6 and 7 are closed at their upper ends when the device is in operation, is that correct?

A. The outside jacket only extends to the upper plate and to the lower plate.

Q. Yes.

A. The cover 18 with its gasket covers and seals the tops of both cylinders.

Q. Yes.

A. And there is shown in Figure JJ-3 nuts 19 corresponding to the closure means shown in the patent.

Q. I notice that upon each of these exhibits JJ-1 to 4 there have been added numerals and lead lines in any view indicated. Do those numbers correspond to the numbers of the corresponding parts in the Stastney patent 1,288,255?

A. They do.

Q. And do the parts indicated by the same numbers in the Exhibits JJ-1 to 4 and in the Stastney patent correspond, in your opinion?

A. They do.

Mr. Foster: The photographs marked for identification as Defendants' Exhibits JJ-1 to 4 are offered into evidence as Defendants' Exhibits of the same letters. [1347]

The Court: They may be received.

[Note: Defendants' Exhibit JJ will be found in the Book of Exhibits at page 1565.]

The Witness: I believe I did not describe—

Mr. Foster: Pardon me?

The Witness: —inlet pipes 11 and 12 which lead through to the jacket space and which are marked correspondingly on the patent.

(Testimony of William Howard Clapp)

The Court: Let me see those, please.

Q. That overflow valve 20 was the one that extended out, and you had attached a pressure gauge to that, is that right?

A. That was the one through which we exhausted.

Q. Where was your pressure gauge?

A. The pressure gauge was on a small pipe extending from the top of the cross.

Q. Oh, yes.

A. And the little member at the right closing the cross is a safety valve.

Mr. Foster: This I understand to be the safety valve, your Honor, that will rupture at predetermined maximum pressure, and this was the cock or valve through which the discharge was made (indicating on Defendants' Exhibit II).

Mr. L. S. Lyon: Has the witness concluded his statement as to all the differences between this device and the patent?

Q. By Mr. Foster: Are those all of the substantial differences between the device of the Stastney patent and the model?

Mr. L. S. Lyon: The question before was not limited to [1348] "substantial". I think the court would want to know what the differences are and the court can decide whether they are substantial or not.

A. They are all the differences. We use a different frame or foundation for the support.

Q. By Mr. Foster: I understand from Fig. 2 of the Stastney patent that the inner and outer chambers may be made rectangular in cross-section. Have you a reason

(Testimony of William Howard Clapp)

for having the chambers of the model, Defendants' Exhibit II, made circular in cross-section, Professor Clapp?

A. Yes; so I could have it made cheaply out of some old pipe.

Q. And I notice that in the model you have the top plate 18 connected removably to the apparatus by four bolts and nuts, whereas the patent, the Stastney patent, shows that there are just bolt means projecting from the upper end that are secured by nuts. What was the reason for that difference?

A. Two which I give, cheapness of construction and to afford an opportunity to see the space in the jacket.

Mr. L. S. Lyon: May I ask which the witness means is the cheapest to construct, to put four wing nuts on top of the plate or to use those bolts?

Mr. Foster: I have no objection to asking that for you, Mr. Lyon.

Q. Having available pipe of the two sizes required for [1349] the model, which was the cheaper way, in your opinion, to connect the closure head to the chamber, Professor Clapp, by using four bolts and the four nuts that you have employed in the model, or by copying exactly in detail the fastening means that are illustrated in the Stastney patent?

A. The second method would be much more expensive.

Q. I understand that in the Stastney patent, 1,288,255, the pipes 11 and 12 are described as being employed at some stage of the process for circulating and cooling gas between the inner and outer chambers, for the purpose of cooling the contents of the inner chamber, is that correct?

A. That is right.

(Testimony of William Howard Clapp)

Q. In the demonstration of the model which was made in the courtroom this morning no cooling gas was circulated between those two chambers, was there?

A. No; there was not. It would be entirely possible to do so for that arrangement if we wished.

Q. Do you mean by that, that we could connect the outlet pipe 20 at the upper end of the device of the Stastney patent and the model to the inlet pipe 11 shown near the bottom and thus circulate the cold carbon dioxide evolved from the inner chamber in the jacket between the chambers; is that what you contemplate? [1350]

A. Yes. All that would be necessary would be to make a connection between that valve shown in the outlet marked 20 in the patent and bring it down and connect it with one of those pipes as an inlet to the jacket.

Q. By one of those pipes you mean 11 or 12?

A. 11 or 12.

Mr. Foster: I did not understand whether my offer was accepted, your Honor.

The Court: It will be received for the purpose of illustrating the testimony of the witness.

Q. By the Court: The only object of these pipes 11 and 12, was to inject steam to raise the temperature to about the temperature of the soap, and then cool it off later?

A. That is true.

Mr. Foster: That is also described as a cooling apparatus.

The Court: Yes; first heating, and then later cooling. That does not infer you would not have used it at all, if you wanted to take plenty of time?

A. No.

Mr. Foster: The point of my last question with regard to circulation of carbon dioxide was that some of

(Testimony of William Howard Clapp)

the prior patents had disclosed the use of the evolved gas, for heating purposes.

Q. Professor Clapp, as I pointed out, I have a question [1351] about the Cartier patent, 338,034, which is the first patent in that book. Do you have a drawing of that before you? If the device of this patent were provided with a liquid inlet, would it be adapted for the solidification of carbon dioxide, by the expansion and solidification of solid carbon dioxide in one apparatus?

A. It would.

Q. Take the Sailor patent, 467,783.

A. It could be so made, yes.

Q. And the Holden patent, 530,526? You have that before you? A. 530,526?

Q. Yes; if the liquid inlet and the gas outlet were provided at this chamber D of this patent, and the valve which is already shown in line E were closed, will this apparatus be adapted for the solidification of carbon dioxide by expansion and compression of the solid carbon dioxide into blocks?

A. That would mean a chamber D, with a surrounding wall or jacket space, which now contains water?

Q. Yes.

A. An inlet through the valve or pipe marked E?

Q. No, I say if the chamber D were supplied with a liquid inlet and a gas outlet, and this valve already shown in line E were closed, will this apparatus be adapted for solidification of carbon dioxide by expansion and [1352] contraction of solid carbon dioxide into blocks?

A. It would.

Q. You have made reference from time to time, during your direct examination, to the chart marked De-

(Testimony of William Howard Clapp)

Defendants' Exhibit FF for identification. In your opinion, do the references to the page numbers of the various patents which appear thereon indicate the presence of the elements corresponding to the column set forth on the chart? A. What is that?

Q. I say, do the numbers, the line numbers opposite each of the patents on this chart, indicate to the best of your knowledge the presence of the elements set forth in the headings of the chart? A. They do.

Mr. Foster: The chart marked Defendants' Exhibit FF I offer in evidence as Defendants' Exhibit FF.

The Court: It may be received for the purpose of illustrating the testimony of this witness.

Q. By Mr. Foster: Professor Clapp, I have asked you to apply one of the apparatus claims in issue to some prior art patent which you have thus far discussed. Have you done so? A. I have. [1353]

* * * * *

Mr. Foster: That completes my examination. Mr. Miketta has a few questions to ask on the direct examination.

(Short recess.)

Further Direct Examination

Q. By Mr. Miketta: Professor Clapp, you have testified regarding the patent in suit, and have read it, have you not? A. I have.

Q. As I understand your testimony, a man reading the patent in suit, and desiring to construct a machine of the patent, a machine which would form solidified carbon dioxide and also compress it into a block, would have to

(Testimony of William Howard Clapp)

determine for himself, and without instructions from the patent in suit, as to what maximum pressure he should maintain within the snow chamber, is that correct?

A. He would have to know what pressures were used [1359] to produce his product of carbon dioxide snow, yes.

Q. There is no statement in the patent telling him what maximum pressure to employ in that snow chamber? A. No.

Q. And such a man, skilled in this art, desiring to make a machine of the patent in suit, would have to determine of his own knowledge, without instruction from the patent in suit, as to how thick the walls of the chamber should be; is that correct? A. It is.

Q. And it would be necessary for a man skilled in this art, without the assistance of the teachings or an express teaching or instruction of the patent in suit, to determine for himself the size of that snow chamber; is that correct? A. The relative size of it.

Q. And it would be necessary for a man skilled in this art, without the assistance of the patent in suit, to determine what type of nozzle he should use in such a chamber; is that correct? A. It is.

Q. And it would also be necessary for the man skilled in this art, without instruction from the patent in suit, to figure out for himself the rate at which the liquid carbon dioxide is introduced into the chamber? A. Yes.
[1360]

Q. That is not taught in the patent? A. No.

Q. It would also be necessary for a man skilled in this art, and without the teaching or instruction of the patent in suit, to determine for himself, from some other

(Testimony of William Howard Clapp)

available data, what volume of gas would be generated when he did introduce liquid carbon dioxide into the chamber? A. Yes, approximately.

Q. And it would also be necessary for the man skilled in this art, and without the teaching and instruction from the patent, to determine the relative sizes of the inlets and outlets from such chamber; is that correct?

A. Yes.

Q. There is nothing in the patent giving him the relative sizes of the inlets and outlets, is there?

A. No.

Q. Is there anything in the patent to inform the man skilled in the art as to what pressure he should exert in the chamber before he starts pressing? A. No.

Q. So that is another point he would have to determine for himself, and without instructions from the patent? A. Yes.

Q. Is there anything stated in the patent as to pressure at which the snow is to be compressed in making the block? [1361) A. No.

Q. So that this man skilled in the art would have to determine that for himself; is that correct?

A. He would.

Q. Is there any statement in the patent as to what specific density the snow is to be compressed?

A. I found none.

Q. So that the man skilled in the art, without instruction from the patent, would have to make that determination; is that correct? A. Yes.

Q. Is there any statement in the patent teaching this man skilled in the art to operate under conditions which we have called here triple point conditions? A. No.

(Testimony of William Howard Clapp)

Q. Therefore, he would have to determine for himself whether he is to make snow of triple point snow; is that correct? A. Yes.

Q. He would have to know enough not to leave the closure 70 open when he is introducing liquid carbon dioxide into the snow chamber, as shown in Figure 1?

A. Yes.

Q. And he would have to figure out for himself, and without instruction from the patent, as to the use of the rams and pressure to be employed in holding that closure [1362] 70 against internal pressure within the chamber 60; is that correct? A. Yes, sir.

Q. And he would also have to know, this man skilled in this art, that in order to obtain a stable block, he would have to relieve the pressure within the pressing chamber, to zero gauge, or substantially atmospheric pressure before pressing; is that correct? A. Yes.

Q. And, therefore, he would have to modify, and actually proceed contrary to the teachings of the patent, in relieving the pressure in that chamber before initiating his pressing operation? A. That is so.

Q. Is that correct? A. Yes. [1363]

* * * * *

The Court: Before I hear from Mr. Lyon, let me see if I understand that we are all talking about the same thing. I am going to put this in words that I can understand. If you don't understand it, just say so. Your question, with its preamble, is in the nature of a hypothetical question. [1366] You have heretofore testified as to the teachings of certain patents; you have also testified as to the patent in suit; that a man ordinarily skilled in the art could not build and operate a machine to make

(Testimony of William Howard Clapp)

solidified carbon dioxide for commercial use, either triple point or other, without having recourse to mechanical skill to supplement the disclosures in the patent in suit. Now, the question is, could that same man, who had sufficient skill to draw upon his mechanical resourcefulness to supplement the disclosures and the teachings of the patent in suit, make a machine and produce solidified carbon dioxide for commercial purposes by following the disclosures in the other patents to which you have testified, and applying that same mechanical knowledge and resourcefulness that he is theoretically intending to apply to the patent in suit?

Mr. Foster: That's right. [1367]

* * * * *

The Court: Let me ask you this question: If an ordinary skilled mechanic could not take the disclosures of a patent, apparatus, and method, and build and operate a machine to accomplish the purpose for which the apparatus was invented, what good is the patent? [1369]

Mr. Morris: May I say this,—whether it helps or confuses—

The Court: First, can you answer that question for me, Mr. Morris: What good is the patent if a man can't do that?

Mr. Morris: May I have the question?

The Court: If a man skilled in the art, an ordinary skilled mechanic, as of the time of the patent, can't take the disclosures of that patent, both as to apparatus and methods, and build and operate a machine to accomplish the purpose for which the patent is intended, is the patent any good?

(Testimony of William Howard Clapp).

Mr. Morris: The disclosure is inadequate under R. S. 4888.

The Court: Do any of you disagree with that?

Mr. Foster: No, sir.

Mr. Morris: I am again a little confused by the question—not your Honor's, but by counsel's. Counsel is attempting to show two things here: He is attempting to show that with the disclosure of the patent in suit a man skilled in the art could not supply the necessary know-how to operate the machine. Simultaneously—

The Court: No, I don't think that is an answer. You have missed something. I think he did just exactly opposite to that. I think it has been shown by this witness that a man who is sufficiently skilled could take the disclosures of the patent in suit, and applying his resourcefulness and his mechanical ability, he could build and operate a machine, [1370] is that correct?

A. Knowing the things of which I answered Mr. Miketta's questions, yes.

The Court: Knowing the things which you answered seriatim? A. Yes. [1371]

* * * * *

The Court: Wouldn't it be the tendency of the learned man to not realize the difference between a man with an ordinary training and a man with more than an ordinary training?

(Testimony of William Howard Clapp)

The Witness: We have many mechanics over at Tech—and we had 15 years or so ago—to whom I could give a certain machine and tell them to look up the information, and I feel that those men—who were not engineers—would in many cases be able to work out a design that would act effectively. But this legal fiction of what an ordinary mechanic is, I don't know. [1378]

* * * * *

The Court: * * *

I believe a similar question—an open-minded question of that kind—would be improper so far as the other patents discussed by this witness and the disclosures in the prior art are concerned. But that is not the question that the defendants are asking. They are asking this hypothetical question as a follow-up to the series of questions: Professor, given a man who had mechanical ability and resourcefulness sufficient to supply the deficiencies in the patent in suit and still make an operative device, could that same man take the revelations in these other patents which you have indicated and do the same thing?

I am inclined to think that the question is proper from the standpoint of evidence, because they do give us a measuring stick. In all personal injury cases, or in cases in- [1382] volving expert testimony from an accountant—I have had much experience in that particular field—that would be a proper question, because the measuring stick is placed alongside the question. [1383]

* * * * *

Los Angeles, California, Wednesday, May 24, 1944;
10:00 a. m.

(Parties present as last noted.)

Mr. Foster: I neglected to offer into evidence yesterday, and I do so now, as Defendants' Exhibit KK the requests for admissions which was the subject of the stipulation yesterday.

The Court: It may be received and so marked.

[Note: Defendants' Exhibit KK will be found in the Book of Exhibits at page 1569.]

WILLIAM HOWARD CLAPP,
recalled.

Direct Examination
resumed.

The Court: You may proceed.

Q. By Mr. Miketta: Professor Clapp, just before we adjourned yesterday you were testifying regarding the various things that a person would have to determine for himself in order to construct and operate a machine for the solidification of carbon dioxide and pressing of such solidified carbon dioxide in the same chamber. I think the question was rephrased several times and finally took this form: Can a man who had mechanical ability and resourcefulness sufficient to supply the deficiencies in the patent in suit and still make and operate a device—could that same man take the revelations in these various other prior patents concerning which you had testified and do the same thing? A. Yes.

Mr. L. S. Lyon: Wait just a minute, please. I move to strike the answer. [1388]

The Court: It may be stricken.

(Testimony of William Howard Clapp)

Mr. L. S. Lyon: I think "the same thing" is entirely too indefinite. Is that intended to mean that he would and could build the patented device, Fig. 5 of the patent, or is it intended to mean that he could make some dry ice with some unknown combination of these prior references? And also, I object in the question to the use of the term "deficiencies". The witness has not testified that these are deficiencies in the patent. He has merely testified that certain details of pressures and size and things of that kind are not specified in the patent. I do not regard them as deficiencies.

The Court: You are putting a technical meaning on the word "deficiency." He has testified as to certain things that are not disclosed expressly in the patent. Those are the matters referred to as "deficiencies", not that they are deficiencies necessarily to the extent to make the patent invalid, but they are deficiencies in that they are not expressed in the patent. You may answer the question.

A. Yes.

Q. By Mr. Miketta: In order for a man to build a machine to solidify and compress carbon dioxide in the one apparatus from the disclosure of the patent in suit he must have some knowledge to supplement the disclosures of the patent, is that correct? A. Yes. [1389]

* * * * *

Q. What knowledge in addition to that required by such a man to supplement the disclosures of the patent in suit would be required by that man in 1925, having before him the prior patents concerning which you have testified and knowing nothing of the patent in suit, in order for that man to build and successfully operate a machine to solidify and compress [1390] carbon dioxide in a single apparatus?

(Testimony of William Howard Clapp)

Mr. L. S. Lyon: If your Honor please, I object to the question as indefinite and confusing and also as meaningless. For instance, if I understand it, the prior art includes, for example, the snow tank, and the evidence is they did operate the snow tank. Is this witness testifying to what would be necessary to know in order to operate the snow tank, or what is he talking about?

The Court: I do not think the question is sufficiently explicit, and I think the objection is sound. Now, let me ask counsel if this is what he wants Professor Clapp to answer? I am again going to phrase it in my own phraseology and it may not be at all what you want to ask him; if so, just express yourself.

Professor Clapp, you have testified to certain disclosures in the patent in suit. You have testified to what we have described as deficiencies in the patent in suit, the meaning of "deficiencies" being that there is no express language in the patent to indicate those particular matters which you have testified to yesterday afternoon. Now, you have also testified as to certain patents in the prior art, certain ones in this book numbered, I think, from about 1 to 32. Would the same man whom you have testified about in connection with the patent in suit have to supply additional information in order to build the machine which has been described, than those elements which you have testified [1391] about in connection with the patent in suit?

Is that what your point is?

Mr. Miketta: That is substantially the question, your Honor. I adopt that.

The Court: Have I made it clear to you?

Mr. Miketta: Would it help you to have the question read back?

(Testimony of William Howard Clapp)

The Court: Let us see if you understand it. Maybe you can express it much better.

A. Given a man who had the knowledge necessary to construct a machine of the patent in suit, would the disclosures given in the patent in suit, and supplied the deficiencies, and supposing that this man had before him all of the information given in these prior patents—

The Court: About which you have testified.

A. About which I have testified, would such a man be able to construct a machine capable of making carbon dioxide blocks?

The Court: In one unit. A. In one unit?

The Court: And without any knowledge, or having seen or heard of the patent in suit for that particular machine.

A. Yes, and without having heard of the patent in suit.

Mr. L. S. Lyon: I object to that, your Honor, as incompetent, and not a proper method of proof; it is pure speculation. No foundation has been laid for the witness.
[1392]

The Court: Objection overruled. You may answer.

A. He would.

Q. By Mr. Miketta: Would he require any additional knowledge to that which he required in one of your previous answers to build a machine of the patent in suit?

Mr. L. S. Lyon: Same objection.

The Court: Same ruling.

Q. By Mr. Miketta: And which was not supplied by the prior art? A. No.

Q. What is your answer?

A. No, he would not require additional knowledge.

Mr. Miketta: I think that will be all, your Honor.

(Testimony of William Howard Clapp)

The Court: I might explain the basis of my ruling. I feel that the objections made would go rather to the weight to be given the testimony than to its admissibility. I think that with the limitations and the discussion which we have had, the questions are understandable, and that the witness understood them, and that they are clearly admissible from the mouth of an expert. Any further questions on direct, Mr. Foster?

Mr. Foster: No more questions.

The Court: You may cross examine. [1393]

Cross-Examination

Q. By Mr. L. S. Lyon: Prior to May 22, 1928, Professor, had you ever been engaged in the manufacture of dry ice for sale? A. No.

Q. Had you ever seen dry ice manufactured for sale? A. I could not be certain.

Mr. Foster: I object to that as indefinite, unless the question means prior to some date.

Mr. L. S. Lyon: The date is specified; prior to May 22, 1928.

The Court: That is rather indefinite—manufactured for sale. He might have seen it manufactured. It is a compound question.

Mr. L. S. Lyon: If the witness can't answer the question, I don't want to confuse him at all, but when I ask a man if he has ever known of seeing something made for sale, I think that is a definite question.

Mr. Foster: I object upon the ground that it is indefinite, compound, and calls for a conclusion.

Mr. L. S. Lyon: I will reframe the question:

(Testimony of William Howard Clapp)

Q. Prior to that date had you ever seen dry ice manufactured in commercial quantity, or on a commercial scale?

A. I would not be certain.

Q. Prior to this date had you ever seen a machine in which dry ice could be manufactured on a commercial scale? [1394]

Mr. Miketta: That is objected to, your Honor, upon the ground that it is indefinite in the use of the word "commercial".

Mr. L. S. Lyon: I am trying to avoid the use of the word "sale". I think people know what we mean when we say on a commercial scale, as distinguished from a laboratory experiment.

The Court: I think this witness understands what he means. He means commercial as distinguished from a laboratory experiment. Read that question.

(Question read by the reporter.)

The Court: You mean the actual apparatus; not the drawing?

Mr. L. S. Lyon: I mean the actual apparatus, yes.

A. No.

Q. Prior to May 22, 1928 did you give any courses, including anything about what apparatus might be employed for the manufacture of dry ice on a commercial scale, or what method might be used for that purpose?

A. I may have done so. My work was along the line of machine design, in which we brought in as illustrative material a great variety of machines of all sorts; but I could not say positively that I had.

Q. Have you ever given any such course?

A. In the manufacture of carbon dioxide snow or ice?

Q. And the design of the apparatus to be employed therein. [1395]

(Testimony of William Howard Clapp)

A. No, not as a course. I have given courses of design and construction of pressure vessels to stand various pressures.

Q. You have stated there is no statement in the patent in suit as to what pressure is to be employed in the operation of the press shown in Fig. 5. Do you know, as of May 22, 1928, what knowledge was had by the practical workers in the dry ice field as to what pressure should be employed in the solidification of liquid CO²?

Mr. Miketta: I object to that as indefinite; as to pressure at what particular stage of the operation reference is being made. It is calling for a conclusion.

The Court: Read the question, please.

(Question read by the reporter.)

A. I think I do.

Mr. Foster: May we have a ruling on the objection?

The Court: Overruled. The question is if he knows.

Q. By Mr. L. S. Lyon: Did you have that knowledge as of that date, May 22, 1928, or is it based on something you have read or heard since?

A. No, I was acquainted with the relationships of pressure and temperature and volume of carbon dioxide, and its liquids in solid and gaseous states; and I had an instructor under me, Mr. Ogier, who about that time, or a little before, went into the active manufacture of carbon dioxide on a commercial scale, and I had conversations with [1396] him with regard to the work; but I am not able to fix in my mind the exact time.

Q. You don't know whether that was before May 22, 1928, or after?

A. I am quite sure it was sometime before.

Q. How long before, as nearly as you can tell us?

The Court: 1929 was the financial debacle. That may help you.

(Testimony of William Howard Clapp)

Mr. L. S. Lyon: It did not mean so much the college professors, I hope, your Honor.

The Court: I don't know. I am afraid it did.

A. This young man graduated from the institute, or just failed to graduate, before the last war; then he came back with us as an instructor, and was an instructor. He finished his work, and came back as an instructor, and was there for maybe five or six years—I am not sure; then he went out into this dry ice field, so it is my belief that it was quite a long time before 1928.

Q. By Mr. L. S. Lyon: What pressures were employed by Mr. Ogier, as you learned of his work?

Mr. Miketta: I object to that as indefinite, and not identified as to the particular stage of the operation.

The Court: Objection sustained. The pressures about which he talked in the patent were the maximum pressures in the snow chamber. I think you should indicate particularly which pressure you refer to. [1397]

Mr. L. S. Lyon: I had better state it piece by piece.

Q. Can you answer the question with reference to the temperature during the feeding into the apparatus of the liquid CO²?

Mr. Foster: That is objected to—

Mr. L. S. Lyon: I mean the pressure instead of the temperature.

Mr. Foster: Objected to as immaterial, and calling for hearsay.

The Court: Overruled. He has a right to test his knowledge of the art.

A. Yes, we know that carbon dioxide—

Mr. L. S. Lyon: I am afraid you are not answering my question, Doctor.

(Testimony of William Howard Clapp)

The Court: No. Read that question for Professor Clapp, Mr. Reporter.

(Question read as follows: Can you answer the question with reference to the pressure during the feeding into the apparatus of the liquid CO²?)

Q. By Mr. L. S. Lyon: The question is, Professor, what was that pressure employed by Mr. Ogier, as you learned of his work?

A. Well, he introduced the material as a liquid, and allowed it to evaporate, and it was in a cool state and under pressure when he introduced it. Do you mean the pressures at which it was introduced into the chamber, or the [1398] pressure within the chamber?

Q. The pressure within the chamber during the time the CO² was going in.

A. I should say anywhere from atmospheric up to 60 to 70 pounds per square inch.

Q. Are you answering now as to your recollection of what Mr. Ogier actually employed, as you learned it at that time?

A. And my knowledge as I have talked with him of the relationships of pressure and temperature.

Q. What pressure did he actually employ at that stage of his operation, as you were informed then?

A. I couldn't say that definitely, of my recollection.

Q. Do you know whether or not, prior to May 22, 1928, you had any knowledge of the manufacture of dry ice at the triple point?

Mr. Miketta: That is objected to as immaterial, your Honor; it is not referred to in the patent.

The Court: Well, that is true, and yet he is testing the knowledge of this witness of the subject as of that

(Testimony of William Howard Clapp)

time, not for the purpose of proving or disproving a fact, but to show what his experience and knowledge was at that time; and, with that understanding, I think the question is proper. You may answer.

A. I knew what the triple point of carbon dioxide meant and I am pretty sure that I knew at that time the conditions [1399] of pressure, temperature, and volume under which the three phases of gas, liquid, and solid could co-exist.

Q. By Mr. L. S. Lyon: You knew that as a matter of scientific knowledge, I take it, at that time?

A. Yes.

Q. But did you know of the manufacture of triple point dry ice at that time?

Mr. Foster: Objected to unless it is meant for the same limited purpose as indicated by the court.

Mr. L. S. Lyon: That is all.

The Court: It is undoubtedly for the same limited purpose. You are speaking now either as laboratory experiments or commercially, either way?

Mr. L. S. Lyon: Either way at the moment.

A. Well, I think I should say that the word "triple point" as used in the art here is very much more loosely used than we use it in a scientific way.

The Court: You just explain how you used it in a scientific way.

A. There is a very broad, profound generalization of science known as the "Phase Rule" which gives the relations between the various phases—in this particular case, gas, liquid, and solid—the number of components in the system—in this case, one, CO_2 —and what is called the degrees of freedom, and by that I mean the number of

(Testimony of William Howard Clapp)

variables—pressure, temperature, and volume, or what is the same thing, [1400] since we are referring to a definite weight of substance, say, a pound—the proportions of the constituents—of the phases, rather—and the Phase Rule states that the degrees of freedom, that is, the number of these variables, pressure, temperature, or volume, which may be independently varied without causing any of these phases to disappear, regardless of the number of components of the system, is expressed by the term “the degrees of freedom are equal to the number of components present, plus two, minus the number of phases.” At triple point we have one component, CO_2 ; we have three phases, liquid, solid, and gas. The Phase Rule states that the degrees of freedom are these components, one, plus two, minus the number of phases, three; in other words, there are no degrees of freedom.

That means that we cannot independently alter the pressure or alter the volume or alter the temperature without causing one of those phases to disappear.

Now, that is the sense in which triple point is used scientifically. Here we may be expanding into a chamber in which the volume is changing continuously, pressure may be varied during that time. We say we make triple point ice. That would mean that, at some time during this operation, there should exist within that cylinder conditions under which solid, liquid, and gas will simultaneously co-exist.

Q. Professor, perhaps if I explain to you what I am interested in perhaps we can shorten this up, which I would [1401] like to do. I am not questioning your scientific knowledge at all. What I am interested in is what you knew about what the men working in CO_2 art,

(Testimony of William Howard Clapp)

commercial art, knew prior to May 22, 1928. Am I to understand that you had a knowledge of what those men knew at that time, or, as a matter of fact, you did not know what they knew; you were not in contact with the industry where you would know; is that latter correct, or what is the fact?

A. I was in contact with the industry because I was very much interested in this young man and his work. We discussed it. My memory of the thing is not very sharp, but we knew that liquid carbon dioxide was expanded in a chamber and snow was made and snow was pressed.

Q. Was your knowledge confined, so far as what the commercial men knew or what their practices were at that time, to what you learned about Mr. Ogier's operation? Did you have any other contact with the commercial CO² art?

A. Not that I can recall.

Q. Did Mr. Ogier ever build an apparatus and operate it on a commercial scale? I mean by the latter, on a regular production scale as distinguished from a laboratory operation?

A. I don't know whether he built an apparatus or not. He was engaged in the commercial production of dry ice.

Q. Did you see his apparatus? A. No.

Q. And you can't remember now what pressures he operated [1402] at at the different stages of the operation, is that correct?

A. No; I don't know definitely the pressures at which he operated. I know they must have been within certain limits.

Q. You also specified that the patent in suit does not disclose the type of nozzle or shape used at the CO²

(Testimony of William Howard Clapp)

inlet. As of May 22, 1928 did you have any knowledge of what types of nozzles were employed in the dry ice industry for that purpose?

A. I don't know as I ever saw any nozzles. The principles employed are the same principles as are employed in hydraulics.

Mr. L. S. Lyon: I move to strike that out. I am not asking the witness what the principles are. I am asking him what he knew at that time.

The Court: Read the question.

Q. By Mr. L. S. Lyon: Did you actually at that time have any knowledge of what types of nozzles were being employed for that purpose in the dry ice industry?

A. I think I did.

Q. How did you get that knowledge?

A. By conversation with Mr. Ogier.

Q. What type of nozzle was he using?

A. I believe he was using a straight nozzle.

Q. Do you remember?

A. No; I would not be positive. [1403]

Q. And all you knew about it at that time was what you learned Mr. Ogier was using, is that right?

Mr. Foster: Objected to as indefinite, "all you knew about it".

Q. By Mr. L. S. Lyon: About the type of nozzle employed in the dry ice industry at that time for that purpose? A. I will not be sure.

Q. You have stated that the patent in suit does not disclose or specify the rate of liquid CO² feed into the apparatus. At that date, May 22, 1928, did you know what rates of feed were being employed in the dry ice industry?

(Testimony of William Howard Clapp)

A. Well, that is a very indefinite question. It says nothing of the size of the cylinder, which would make a great deal of difference; it says nothing of the pressures on the inlet side, all of which would control the rate of flow into the material.

Q. Well, taking those into consideration as part of the factors in determining the rate of feed, did you know what rates of feed were practiced in the industry at that date? Did you have any knowledge of it?

A. No. I don't think I gave it any thought.

Q. Your answers would be the same for each of these other factors that you say are not specified in the patent in suit, to-wit, that you had no more knowledge than you have indicated as to any of them as of May 22, 1928?

Mr. Foster: Objected to. [1404]

Q. By Mr. L. S. Lyon: Isn't that correct?

Mr. Foster: Objected to as vague, indefinite, and compound. The witness has testified to varying degrees of knowledge, and compound in not reciting all of these factors separately.

Mr. L. S. Lyon: I am trying to shorten this up.

The Court: I do not believe you can, though, under the circumstances. The objection is sustained. I think you might ask a general question which might cover it.

Q. As I understand it, Professor, your knowledge of the practical manufacture of solidified CO_2 at that time was gleaned from your general scientific knowledge, what reading you came across, your contact with this assistant of yours who was engaged in the production?

A. That is right.

Q. You had no contact with others engaged in the industry to talk over their problems, or they did not give

(Testimony of William Howard Clapp)

you any particular information about the problems they were facing? A. Not that I can recall.

Q. By Mr. L. S. Lyon: Professor, will you turn to Fig. 1 of the patent in suit? Do you find on the line 80, opposite the heat exchanger 40, a valve which carries no number?

A. With an arrow pointing upward alongside the valve?

Q. Yes, sir. A. I do. [1405]

Q. In the operation of the apparatus shown in Fig. 1 during the boil-out period it would be possible, would it not, by a sufficient closure of that valve to maintain a pressure of, say, 75 pounds on the solidifying chamber?

Mr. Miketta: Objected to, your Honor, as assuming a fact not in evidence. The witness has not testified and the patent does not refer to a blow-out period.

The Court: Read that question, please.

(Question partially read by the reporter.)

Mr. L. S. Lyon: No. I had better rephrase the question because that would be objectionable. Just strike it out, please.

Q. In the operation of the apparatus shown in Fig. 1 could not the valve just mentioned be sufficiently closed so as to maintain a pressure of 75 pounds in the solidifying apparatus during a boil-out period?

Mr. Miketta: The same objection, your Honor. No reference made to boil-out period.

The Court: I do not remember any reference in the patent.

Mr. L. S. Lyon: Well, I don't think any is necessary, anything is necessary of that kind in the patent. I am basing my cross examination on pages 1206 and following

(Testimony of William Howard Clapp)

of the record, in which the witness, as I understood his testimony, attempted to say that certain things could not be done with this apparatus, and I want to show that they can be done with it. [1406]

The Court: 1206?

Mr. L. S. Lyon: 1206, beginning at the bottom of page 1205, the question. That is volume 11, your Honor, at the bottom of page 1205.

"Q.—There has been some testimony in this case with respect to operations in which carbon dioxide gas was fed back into the snow chamber 50 or a similar snow chamber when the liquid inlet was closed, to build up in there a pressure of the carbon dioxide gas of 40 pounds or 30 pounds or 50 pounds. In view of the disclosure of this patent, would it be possible with the apparatus in Fig. 1 to do so?"

And the witness elaborated on the fact that this gas holder No. 12 would only hold a pressure of about one pound, and said, therefore he could not see how you could have any higher pressure than that in the system.

The Court: Suppose you just eliminate the boil-out period and ask him at any time if it would accomplish the same purpose.

Mr. L. S. Lyon: That is satisfactory. Of course, unless you had some period in mind you could not get such a pressure.

The Court: Well, then, that is up to him. His statement was in general terms

Mr. L. S. Lyon: Do you want me to recast the question?

The Witness: Please.

(Testimony of William Howard Clapp)

Q. By Mr. L. S. Lyon: Could not a pressure of, say, 75 [1407] pounds be maintained in the solidifying chamber 50 by a suitable closure of the valves to which I have called your attention?

Mr. Miketta: Objected to, your Honor, on the—

Q. By Mr. L. S. Lyon: And by also operating similarly and closing down the unmarked valve between the line 80 and the heat exchanger?

Mr. Miketta: Objected to, your Honor, on the ground that it is indefinite in the use of the word "maintained".

The Court: Well, let us use the word "built-up" instead of "maintained" for this question. You may answer.

The Witness: The word what?

The Court: "Built-up", build up that pressure.

A. "Built-up." Yes; if the inlet pressure was sufficiently high. I found no disclosures in the patent that called attention to any such type of regulation.

Q. By Mr. L. S. Lyon: But the apparatus disclosed in Fig. 1 is capable of such regulation, is it not?

A. Yes, sir. [1408]

Q. You have referred to the exhaustor 81, and stated that a common type of that device would be what is known as a Roots blower.

A. Roots blower, R-o-o-t-s.

Q. That is a positive motor-driven paddle type blower, is it not?

A. Not paddle type. It consists of cycloidal-shaped elements, which roll on each other continually in contact, much as two elaborately-shaped gear teeth would roll on each other.

Q. They are positively motor-driven?

A. They are positively motor-driven.

(Testimony of William Howard Clapp)

Q. Those devices were, at the date, say, May 22, 1928, on sale and recommended for use up to 125 pounds,—at least tested up to 125 pounds pressure, were they not?

A. No, I don't think so. I have been acquainted with them for a long while; in fact, I learned of the Roots blower when I went to college. So far as I knew, in my experience, they have always been used for low pressure work. Marks Mechanical Engineers Handbook, last edition, says that they are most efficient around 4 to 5 pounds per square inch pressure, and they are sometimes used up to 10 or 12 pounds pressure.

Q. Have you any knowledge as to what pressure they are tested for, or rated for by the manufacturer, as of that date? [1409]

Mr. Miketta: That is objected to as indefinite.

The Court: You can answer yes or no.

A. I think I have. I have seen lots of catalogues. You are asking me to go way back in my memory,—of the Roots blower, and I never saw one that proposed using them as a high pressure device, for which we use compressors. They are not efficient in that way.

Q. I am asking you, Professor, if you know whether or not they are tested by their manufacturer at a pressure which would permit their being used up to 120 pounds or 125 pounds?

Mr. Foster: I object to that as immaterial.

A. No, I don't know of any such tests.

Q. By Mr. L. S. Lyon: The Roots blower has been more or less a standard article since long before 1928; is that correct? A. Yes.

Q. I show you a catalogue which reads on the title: Roots Connersville Rotary Positive Blowers. Can you

(Testimony of William Howard Clapp)

identify that catalogue as illustrating the well-known Roots blower?

Mr. Miketta: May we approach the stand? Can we hear the question again?

(Question read by the reporter.)

A. Yes, and there are also high pressure relief valves in the same catalogue. [1410]

Q. By Mr. L. S. Lyon: Of the type that would be employed at the point indicated by the legend "Diaphragm Valve" in Figure 1 of the patent in suit?

Mr. Miketta: I object to that as calling for the conclusion of the witness, and is an assumption that the catalogue pertains to and is of the date of prior to May, 1928.

The Court: Objection sustained.

Mr. L. S. Lyon: Your Honor, I think I am entitled to ask the witness what type of well-known apparatus is indicated to him as an engineer by the point on the diaphragm to which I have called attention. He was permitted on direct examination to refer to the adjacent point, and stated what type of apparatus is referred to.

The Court: I thought that your question was directed to the particular illustrations in the catalogue.

Mr. L. S. Lyon: No, I am just using that to illustrate what it would indicate.

The Court: You asked him as a general application of these valves pictured in that catalogue, are they of the same general type that would have been used at that time for the purpose indicated, at the point of the diaphragm valve in the drawing? You may answer.

Mr. L. S. Lyon: That is the intent of my question.

(Testimony of William Howard Clapp)

Mr. Miketta: Then there is no foundation laid, because this catalogue is not of that earlier date to which counsel referred, 1928. [1411]

The Court: It does not make any difference. He is simply using that as a convenience to find out the opinion of the witness, if they used that type of valve.

Mr. L. S. Lyon: I think you haven't listened to the question. I think he was interested in the catalogue.

Q. You mentioned the pressure relief valves that are shown in this catalogue? A. Yes.

Q. Is this one type that, as an engineer, you would understand were to be used at the point by the legend: Diaphragm Valve, on Figure 1 of the patent in suit?

A. Yes, they are approximately what I had in mind. [1412]

* * * * *

Q. By Mr. L. S. Lyon: Is the Roots blower, as you know it today, any different from the Roots blower as you knew it in 1928?

Mr. Foster: Objected to as immaterial.

The Court: No, I think it is perfectly proper. He can answer that question, if he knows.

A. Yes, I know that the Roots blower, along with most of these rotary positive pressure types of machines, have [1414] had a capacity to work at increased pressure, very much increased, due to the advance in the mechanical art, of the balancing of the heavy rotating element, to better machined surfaces, so that we are able to get contact and run at higher speeds. How far that advance had gone at that particular date, 1928, I can't state positively. I have a very definite impression that they were, up to that time, used pretty much as low pressure devices.

(Testimony of William Howard Clapp)

I know that the last edition of the Mechanical Engineering Handbook gave the data on the pressure for the Roots blowers efficiencies, as I have stated.

Q. Professor, is it your testimony that you know that prior to 1928 the Roots blower would function only at pressures, say, up to 4 pounds, and would not function up to a pressure, say, of 1925 pounds?

A. No, I hadn't made any such statement.

Q. I am going to refer in my questions, when I refer to the Roots blower, as of the date of 1928. The Roots blower could function as a brake, could it not?

Mr. Foster: Objected to as indefinite.

The Court: I am not sure that I understand what you mean; that the Roots blower with which he was familiar in 1928, could function as a brake?

Mr. L. S. Lyon: Yes, as distinguished from an impeller.

A. I don't think I understand the question—function [1415] as a brake?

Q. First we will come to this diaphragm valve, which you have referred to, and which is called for in Figure 1 of the patent drawing. In the operation of such a diaphragm valve, the valve is regulated by a weight or spring, or something of the kind, so that if the pressure on the inlet side of the valve drops below a certain point, the valve will open and by-pass, holding back the line, and maintain a certain minimum pressure, will it not?

A. Not necessarily, no.

Q. Is that one way in which it could be operated?

A. No.

Q. How would such a device work when incorporated in the system shown in Figure 1 of the patent in suit?

(Testimony of William Howard Clapp)

A. The valve would work to permit pressure from the higher pressure side to the lower pressure side when the difference in pressure between the two sides reached a certain value, as determined by the set of the spring. [1416]

Q. So the diaphragm valve could function to maintain, in line 80, a minimum pressure of not more than the pressure in the gas holder, that is correct, is it not?

Mr. Miketta: May I hear the question again?

The Court: Read it.

(Question read by the reporter.)

A. In line 80 above the valve which is shown there, provided you had it closed.

Q. Or throttled? A. Yes.

Q. Isn't the apparatus shown in Fig. 1 of the patent in suit capable of operating under the following conditions: With a pressure of 75 pounds in line 80, up to the two unmarked valves, a pressure of 30 pounds between such valves and the exhauster 81, and a pressure fixed by the gas holder of approximately one pound, in line 83?

The Court: You have got the original exhibit. Let us put the letters on the three valves, and it is going to be very much easier to discuss it then. Has the patent in suit been introduced in evidence?

Mr. L. S. Lyon: Yes, here it is, Exhibit No. 2. For the purpose of clarifying the record as to the witness' testimony, with the court's permission, I will mark these two unlegend valves in line 80, as 80a and 80b respectively.

The Court: That will be fine. The one on the direct line is 80a? [1417]

Mr. L. S. Lyon: And the one on the line below—

(Testimony of William Howard Clapp)

The Court: That is closed off. You had better mark that 80c. We have a on the vertical, b on the horizontal, and c on the horizontal, is that right?

Mr. L. S. Lyon: I have only marked 80a and 80c. There are other valves here.

The Court: Are you going to refer to them?

Mr. L. S. Lyon: I don't believe so; not for this question.

The Court: Mark the diaphragm valve as 80b.

Mr. L. S. Lyon: The diaphragm valve is already marked 84, so we won't need to do that.

The Court: Read the question.

(Question read by the reporter.)

Mr. L. S. Lyon: I will amplify the question by identifying the two valves in the statement "up to the two unmarked valves" as "up to the valves 80a and 80c," now marked on Exhibit 2.

Mr. Foster: The question is objected to as indefinite in the use of the term "capable of operating," as not indicating whether it is a static condition, or at what stage of the operation, or whether as described in the patent in suit.

The Court: I think you can bring that out on redirect examination. If the witness can answer, I think he is entitled to. [1418]

A. I think this question hinges on whether they plan to turn that diaphragm around, and make the high pressure side at the left and the low pressure side at the right, as different from what is shown in the figure by the arrows. The diaphragm valve 84—

Q. By Mr. L. S. Lyon: Is your answer to the question yes or no, Professor? If you can answer it, I wish you would.

(Testimony of William Howard Clapp)

A. Can we close valve 80, and throttle 80a, maintaining a pressure of 75 pounds in the snow chamber, provided there is a high enough inlet pressure, and have an exhaustor which would work in reverse from what is shown in Fig. 1, so as to maintain the low pressure on the right-hand side, and the high pressure on the high side, and then by-pass through the diaphragm valve from the left to right?

Q. Maybe we have got too much in the question.

A. That's the way I understand the question.

The Court: I understood it that way, as long as you can figure out some machinery that would be capable of doing it, you are permitted to do so. Is your answer that it could be done in that way?

A. If there were at that time an exhaustor capable of handling the pressure of one pound, or so, from the gas holder back into the line at 30 pounds, and if these valves 80a and 80c were of such a construction as to permit of operation with 75 pounds on the high side and 30 pounds on the low side, maybe it could be made to work. [1419]

Q. By Mr. L. S. Lyon: I want to clear up one thing about this exhaustor, Professor; if exhaustor 81 is represented by a Roots blower, of the type you have been referring to, can it be interposed in the line with 30 pounds between the valve 80a and the exhaustor, and the one pound pressure on the opposite side of the exhaustor to the gas holder, and function in that manner, the exhaustor acting as a brake? [1420]

Mr. Foster: That is objected to, your Honor, as contrary to the teachings of the patent. The patent teaches this exhaustor drives the gas—page 2, line 9—to the gas holder 12. It is assuming a fact not in evidence, and

(Testimony of William Howard Clapp)

contrary to the teaching of the patent. It assumes that the exhauster drives the gas in the opposite direction.

Mr. L. S. Lyon: If your Honor please, this is cross examination. The witness undertook to testify on direct examination that this apparatus, shown in Figure 1, was incapable of having a high pressure gas release, and that all gas releases would have to be low pressure, and, therefore, the pressure in the snow chamber would have to be low pressure. I want to cross-examine him on that subject.

Mr. Foster: I don't agree with his statement of the witness' testimony. The witness did testify to the operation of the apparatus in Fig. 1, as illustrated and described in the patent. Mr. Lyon makes a premise directly contrary to the express language of the patent as a basis for a hypothetical question. I object to it. The question contemplates a reconstruction of the apparatus illustrated, as well as an assumption contrary to the express teachings of the patent.

The Court: Of course, it might not prove anything. It is testing the witness' knowledge of the subject on cross examination. I think he is entitled to ask the [1421] question. It might not be of value, so far as the fact is concerned, if not within disclosures of the patent, but that is another thing. You may answer.

Q. By Mr. L. S. Lyon: Do you need the question read, Professor?

A. No. I am pretty sure I understood it, as stated. If at that time, as of 1928, there had been a positive type rotary blower capable of working between the limits of 1 pound and 30 pounds, and if that blower were set to operate from the gas holder side back into the line 80, and

(Testimony of William Howard Clapp)

if the diaphragm valve were adjusted opposite to what is shown in the arrows, then I would say that could be done.

(Short recess.)

The Court: Proceed.

Q. By Mr. L. S. Lyon: Professor, I want to clear up at this point about the necessity of reversing the motor or the blower under the conditions that we have been discussing. Is it your testimony that it would be necessary to reverse the motor or the blower 81 if you are going to change from a condition of operating the system for low-pressure gas draw-off or relief as compared to a high-pressure draw-off? And by "low pressure" I mean about 1 pound, and by "high pressure" I mean the triple point or slightly above, say, 75 pounds.

Mr. Foster: Objected to as indefinite. I don't understand it, your Honor—maybe the witness will—as [1422] to where the gas is drawn off from and as to whether the snowing operation is to take place in the snow chamber at the time contemplated in the question and the reference to the preceding question.

A. I should like, if I may, your Honor, to clarify my last answer there, which was made under the assumption that we are snowing in the snow tank; that the pressure is being built up there by throttling the valves 80a and 80c so that there can exist a pressure of 75 pounds or so in that line, and that then the exhauster might be operated as of that time, possibly, to maintain a pressure of 30 pounds between the exhauster and the line 80a with one pound pressure in the gas holder. That assumes a static condition, and, of course, it would not at all be possible for such a condition to obtain if we were not snowing and

(Testimony of William Howard Clapp)

if we did not have such a pressure in the gas chamber; that is, we are not supposing that it would be possible in such a system as outlined that that could operate dynamically to arbitrarily raise the pressure from 30 pounds on the exhaustor side of valve 80a to 80 pounds on the snow tank side. [1423]

Q. By Mr. L. S. Lyon: I agree with you, Professor, that it is implicit in all of our discussion that a sufficient gas was being produced in the snow chamber to build up or maintain these pressures we have been talking about between the snow chamber and the exhaustor. Now, with that understanding, can you answer my last question?

A. If you have 80 pounds, say, on the snow chamber side of valve 80a and 30 pounds on the other side, one would naturally assume that gas would be flowing from the high-pressure to the low-pressure side.

Q. And wouldn't it be possible for the exhaustor to be acting actually as a brake so as to produce the reduction in pressure from 80 pounds on the left-hand side of the exhaustor to the one pound on the right-hand side of the exhaustor?

A. Not unless the exhaustor was run in the opposite direction.

Q. Are you sure of that?

Q. By the Court: Opposite direction from what?

A. From what is intended by these arrows.

Mr. L. S. Lyon: I am not talking about—

Q. By the Court: The arrow on the vertical side opposite the valve 80a and the arrow on the horizontal side running from that line to the exhaustor?

A. 81; yes, sir.

(Testimony of William Howard Clapp)

Q. (Continuing) Controls the flow from higher to lower [1424] pressure, running up and to the right?

A. No; I don't believe it could be possible for an exhauster to work without rotation in the opposite direction from which the gas flow would be going from pipe 80 back to the gas holder.

Q. By Mr. L. S. Lyon: Let me see if I understand what you mean, Professor. We are talking about a condition where we have 30-pound pressure between the exhauster and the valve 80a; the gas is flowing to the exhauster; and the question is on the assumption that the pressure on the opposite side of the exhauster, between the exhauster and the gas holder, is one pound.

A. And the gas is flowing in which direction?

Q. It is flowing from the 30-pound side through the exhauster to the one-pound side. Couldn't that be true?

A. And we are using the exhauster as a brake, meaning that the exhauster—that these blowing elements are held stationary.

Q. This Roots blower to which we have been speaking is positively driven, is it not? A. It is.

Q. And having in mind that positive drive, under those conditions would not the exhauster function as a brake, without reversing the motor or the drive?

A. To maintain a pressure of 30 pounds on the left-hand side of the exhauster and a pressure of one pound on the [1425] other side of the exhauster?

Q. Correct.

A. Could it be run slowly enough and could there be so little leakage that that condition could obtain? I question it. Of course, the volumes of gas involved here, how small that exhauster was, would all be questions.

(Testimony of William Howard Clapp)

Q. Professor, we expect to show that that is actually the way the device was operated at the plant of the General Carbonic Company, and I want to be perfectly fair to you. Is it your testimony that that could not have been done?

A. No; I don't believe it could have been done and I don't believe it would have been done. Why not put a reducing valve in place of that exhauster?

Q. Well, my question is: You are prepared to say that it could not have been done mechanically with the Roots blower? A. I don't believe it could.

Q. Is it your testimony that, with the apparatus shown in Fig. 1 of the patent, a vacuum would be pulled on the snow chamber, or if the snow chamber was open, that air would be sucked into the line 80 by the blower?

Mr. Foster: Objected to as indefinite as not specifying the stage of the operations referred to.

The Court: Objection sustained.

Mr. L. S. Lyon: I think that specified the stage. I think I have specified the stage. I said, with the snow [1426] chamber closed or with the snow chamber open and no CO₂ being fed into the inlet.

The Court: Read the question, please.

(Question read by the reporter.)

A. Assuming the snow chamber was closed, that is, that that head 70 shown there has closed off the pressing cylinder 60, then I don't see how any air could be sucked into a closed system.

Q. By Mr. L. S. Lyon: Well, maybe I can shorten it up in this way: As I understood your testimony, Professor, you said that there was nothing in this system of

(Testimony of William Howard Clapp)

Fig. 1 which would preclude the exhauster drawing air into the system through the pipe 80 if the snow chamber was open to the entrance of air. Did you mean to say that?

A. Well, of course, you could close off the valves 80a and 80c completely.

Q. Could not the pressure regulator valve indicated by the legend "diaphragm valve" be set so as to maintain a pressure of up to one pound in the line 80?

A. Yes.

Q. How would you set the pressure regulator valve to do that?

A. You adjust the spring for a given pressure difference between the high-pressure and low-pressure sides.

Q. And if the low-pressure side became the line 80 and there was one pound pressure in the line 83, the pressure [1427]regulator valve would maintain a pressure of one pound in the line 80, would it not, so set?

A. If the low-pressure side were line 80—

Q. Yes. A. —valve 80a open, now—

Q. Yes.

A. —and the high-pressure side from the gas holder had a pound of pressure or so in it—

Q. That is correct.

A. —and the exhauster is working, drawing material from the left and delivering it at the right of the exhauster—

Q. That is correct.

A. —then it would be possible to set the springs so that the material, the gas on the side 83 could flow back to the side 84 to substantially the pressure on the side 83.

(Testimony of William Howard Clapp)

Q. And the gas flowing back from the line 83 would travel through the diaphragm valve or pressure-regulating valve in the direction indicated by the arrows—

A. Yes.

Q. —on the drawing under those conditions, would it not? A. Yes.

Q. And under those conditions a pressure approaching one pound would be maintained in the line 80 through the function of the pressure-regulating valve, isn't that correct? A. Yes. [1428]

Q. Have you ever seen an apparatus like Fig. 5 of the patent in suit in operation in the manufacture of dry ice?

Mr. Foster: Objected to as indefinite as to time.

The Court: Well, at any time.

Mr. L. S. Lyon: At any time.

Mr. Foster: Objected to as immaterial.

The Court: Objection overruled. He may answer yes or no. A. No.

Q. By Mr. L. S. Lyon: Professor, have you ever been in any plant where dry ice was being manufactured on a commercial scale? A. Yes.

Q. Where?

A. I have been down to the plant down at the southern end of Salton Sea, where they are manufacturing dry ice.

Q. Have you ever been in any of the plants here in town, the Liquid Carbonic plant, for example?

A. Not that I recall. I have made many inspection trips but I don't recall.

Q. Have you ever been in any plant where the Cole and McLaren apparatus of Fig. 5 was being employed?

A. No.

(Testimony of William Howard Clapp)

Mr. L. S. Lyon: Your answer was?

(Answer read by the reporter.)

Q. Except for this trip you made to the plant at Niland have you ever been in a plant where dry ice was being [1429] manufactured on a commercial scale?

A. I can't state definitely, but I think not.

Q. When did you make this trip to Niland?

A. A couple of months ago.

Q. Is that the only time you were ever there?

A. Yes.

Q. Will you refer to the patent to Cartier, Exhibit EE-1? What, if any, changes or additions would have to be made in the device shown in that patent in order to manufacture dry ice practically on a commercial scale, if you know?

Mr. Miketta: Objected to, your Honor, indefinite as to the use of the words "commercial scale."

Q. By Mr. L. S. Lyon: When I use that term, Professor, I am using it to distinguish from a laboratory experiment such as we all understand, that you can make dry ice in a paper bag or in your hat or in most anything — you can make some. I am talking about a practical operation.

The Court: You may answer.

A. Well, I should not limit myself to the proportions of the cylinder and so forth as shown in this Figure.

Q. By Mr. L. S. Lyon: Did you ever see one of these presses shown in the Cartier patent?

Mr. Foster: Objected to as immaterial.

The Court: Objection overruled.

A. No; I don't think so.

(Testimony of William Howard Clapp)

Q. By Mr. L. S. Lyon: Do you know what approximate size [1430] it would be when used as an oil press?

A. It might be made various sizes, depending upon what capacity they wanted, how much material they wanted to handle.

Q. What sizes are oil presses usually built for?

A. I think that would depend upon what they were pressing. They might be pressing cottonseed; they might be pressing olives or flax or —

Q. Do you know what kind of a press this was that Cartier was describing? I mean is it an olive press or what do you think it is?

A. The patent does not disclose and I had never heard of the patent until I saw this one.

Q. Based solely on what you can observe from looking at this patent, then, what changes, if any, or additions would have to be made in this device of the Cartier patent in order to practically manufacture dry ice in it?

A. This question of practical manufacture is a difficult one. We want an inlet opening.

Q. There is no inlet opening for CO² shown in this patent, is there?

A. No. To do it practically, I should say we should have an inlet opening.

Q. What other changes would you have to make?

A. I don't see any.

Q. Would you have to make any changes in the outlets or the drainage system? [1431]

A. No; I don't think so.

Q. Have you ever made any experiments to find out?

A. The patent states that there are —

Q. I am asking: Have you made any experiments with this device? A. No.

(Testimony of William Howard Clapp)

Q. To find out whether you could manufacture CO² in it, dry ice in it?

A. No. I was tempted to use that machine rather than the Stastney device, but didn't do it.

Q. Do you know whether or not any difficulty would be experienced in the oil drainage system freezing up if you attempted to manufacture dry ice in this Cartier device?

A. The patent states that there is a perforated plate cover with a filter cloth here. One could make a filter cloth of billiard cloth if he wanted to, which would be, perhaps not quite impervious to gas, but it certainly would be to liquid.

Q. You are not able to state, basing on any knowledge that you have, that if you could find one of these Cartier presses that you could actually manufacture dry ice in it practically?

A. I would be willing to bet you on it.

Q. Well, without putting any CO² inlet in it?

A. No; I would want an inlet.

Q. But you don't think you would have to make any other [1432] changes at all?

A. This is a very crude drawing. For instance, no stuffing-box is shown around the piston or anything of that sort.

Q. Well, let's assume that you were looking for one of these Cartier presses and you found one and it was an olive oil press. Have you ever seen an olive oil press?

A. Yes.

Q. You know about what they are like?

A. Yes; I do.

Q. Is this Cartier device or apparatus apparently adaptable for pressing olive oil?

A. Yes.

(Testimony of William Howard Clapp)

Q. And I see the inventor came from a certain district in France. Do you know what they press in that district? Maybe it is grapes for champagne.

A. Yes; I thought it was grapes.

Q. Grapes. Well, have you ever seen a wine press?

A. Yes.

Q. Is it your opinion that it would be satisfactory to take that wine press into a plant and use it for the manufacture of solid dry ice?

A. I would have to see the wine press before I could answer that general question.

Q. Well, let us turn to this patent to Sailor. Did you ever see one of those presses? [1433]

A. No; I think not.

Q. Have you ever seen any cotton presses, studied them at all? A. No.

Q. You don't know just what this Sailor device would actually be like if it was built for a cotton press, in any detail, do you?

A. Well, I think the patent discloses pretty well what it would be like. I think one could design a machine that would operate effectively from this disclosure.

Q. Did you ever design a cotton press? Did you ever design a cotton press?

A. Well, it is the same thing whether you design a cotton press or a brick press or something of that kind. You are dealing with pressures and proportions, sizes of cylinders. I don't know as I have ever designed a press for pressing cotton.

Q. Can you make bricks in a cotton press?

A. What?

Q. Can you make bricks in a cotton press?

A. You could; yes.

(Testimony of William Howard Clapp)

Q. What would they be like? A. Like bricks.

Q. Regular-sized bricks in a cotton press?

A. Well, it depends on the size of bricks, and the size of the press. [1434]

Q. Do you know what size a cotton press is?

A. Oh, I suppose the size of a cotton bale, maybe 3x6 feet, or two feet or something.

Q. If you made a brick in that press, it would be the same size as that cotton bale? A. That is right.

Q. Then, what do you mean when you say you could make bricks in a cotton press?

A. I mean you could take this type of machine, of the proper proportions and make brick in it.

Q. I am not asking you that. I am asking you: Could you take a cotton press, a press that was built for making cotton, and take it into a plant, a brick plant, and practically make brick with it?

A. No; that would be ridiculous.

Mr. Foster: I object to that and ask that the answer be stricken. May the answer be stricken?

The Court: Well, he said it would be ridiculous. I think that is a pretty good answer.

Q. By Mr. L. S. Lyon: Wouldn't it be just as ridiculous to take that cotton press of this Sailor patent and try to make dry ice in it? A. Yes; I think it would.

Q. Specifically, what changes, as far as you are able to tell us from your limited knowledge, would you have to make in this device as shown in this patent in order to [1435] convert it from a cotton press to an apparatus in which you could make dry ice?

A. You want an inlet opening. We will do away with those bale grooves and see that the low-pressure piston is a fair fit within the press. We could have exists for

(Testimony of William Howard Clapp)

CO² gas from the bale grooves in the top platen D. Nothing is said as to the size of those grooves. I think that might make a pretty fair chamber to make CO² snow and compress it.

Q. When operated as a cotton press the cotton, of course, is produced outside of the press, is it not?

A. Yes.

Q. There is no manufacture in the device of the material to be pressed in the sense of the production of solid CO² in the same chamber in which you press; that is true, isn't it?

The witness: May I hear the question?

(Question read by the reporter.)

A. I don't believe I understand that question.

Q. Well, you understand that in the operation of the apparatus shown in Fig. 5 of the patent that the CO² is solidified in the same chamber in which it is pressed?

A. Yes.

Q. Do you understand that? A. Yes.

Q. But in this Sailor patent the material to be pressed is prepared outside of the press, is it not? [1436]

A. If we had an inlet opening, it could be used as a snow chamber.

Q. Well, I am not asking you that. I am asking you: In the operation of this device as described in the Sailor patent, or as it would be used for pressing cotton. We all know that you do not grow the cotton in the cotton press.

A. No.

Q. You know that?

A. No; and we all know that we are not going to make the carbon dioxide snow and charge it into this press for pressing.

The Court: At this time we will take our midday recess.

(Whereupon a recess was taken until 2:00 o'clock p. m. of the same day.) [1437]

AFTERNOON SESSION

2:00 O'Clock

The Court: Proceed.

WILLIAM HOWARD CLAPP

recalled.

Cross Examination, resumed

Q. By Mr. L. S. Lyon: Professor Clapp, will you turn to the Holden patent No. 530,526, Exhibit EE-3? Have you ever seen the apparatus described in that patent? A. No.

Q. Have you ever had any experience with the pressing of blocks from chip ice? A. No.

Q. I believe you stated that the chamber D and associated apparatus would have to be changed to enable such an apparatus to be used for the manufacture of dry ice. What changes would have to be made?

A. Chamber D?

Q. I may be wrong, but I thought you said the chamber D.

The Court: That is correct.

A. Yes, yes. I would provide an inlet opening into chamber D for liquid carbon dioxide.

Q. By Mr. L. S. Lyon: Is that the only change you would have to make in that freezing unit, in your opinion?

A. No; I don't see any other. [1438]

(Testimony of William Howard Clapp)

Q. Do you know whether or not the freezing unit as there shown would be inoperative, that is, it would freeze or congeal up if you attempted to introduce liquid CO²?

A. If what would congeal up?

Q. The freezing unit consisting of the parts on this diagram A, B, C, D, and F?

A. Snow would blow around into that space where the water is now, which is something of a jacket space, and would be carried off in the exhaust, as it is in most of the devices described in the patents.

Q. That is not exactly what I asked you, Professor Clapp. Where would you put this CO² inlet?

A. Well, you might put it down near the bottom of the chamber D, or you could even put it up nearer the top and have it point downward toward the outlet at L.

Q. The inlet pipe would have to extend into communication directly with the chamber D, would it not?

A. Yes.

Q. And you couldn't use this scheme by which they introduce the chip ice and float it up through the jacket around the chamber D?

A. No.

Q. When the solidified dry ice had been completed in that chamber in the process of transferring that product from the chamber to the press the ice would be open to the atmosphere, would it not, according to this apparatus?
[1439]

A. When the valve L was opened to let the snow fall out into the pressing chamber?

Q. Yes. A. It would.

Q. By the Court: That is just a gate, isn't it, that L?

A. I beg pardon?

Q. That L is just a gate, isn't it?

A. Just a gate; yes.

(Testimony of William Howard Clapp)

Q. By Mr. L. S. Lyon: And the throat, the expanded end of the cone K extends out beyond the boundaries of the chamber D and open to the atmosphere, does it not?

A. Yes.

Q. Will you turn to the patent to Drummond, No. 533,871, Exhibit EE-4? This is an apparatus for expressing sap or juice from cane such as sugar cane, is it not?

A. Yes, sir.

Q. Did you ever see an apparatus like this as shown in the patent? A. I never did.

Q. Have you any experience with designing or operating apparatus for expressing juice from sugar cane?

A. No, sir.

Q. What changes, if any, would you have to make in this apparatus, in your opinion, in order to employ it practically for the manufacture of dry ice?

A. Again, an inlet should be provided into the pressing [1440] cylinder. I would take out those perforated pipes that are shown there for withdrawing the juice, that is, those are shown in addition to an outlet C, and, of course, I would change the proportions if you want to make a block of certain size. This is a big press. It shows stairs going up there. You wouldn't make —

Mr. Foster: May the witness finish his answer?

The Court: Were you through?

A. You wouldn't make carbon dioxide ice in the sizes that it is now made commercially in that press.

Q. By Mr. L. S. Lyon: In your opinion, you could not take a sugar cane press that had been built in accordance with this Drummond patent and move it into a factory and successfully manufacture dry ice on it without making changes in the machine, is that correct?

A. That is right.

(Testimony of William Howard Clapp)

Q. Will you now turn to the patent to Gaylord, No. 760,191, which I think is Defendants' Exhibit EE-6? Did you ever see an apparatus like that disclosed in this patent? A. No.

Q. Without change would it be possible to manufacture any dry ice products in this device, except pipe stems?

A. Certainly.

Q. Could you manufacture commercial sized blocks of ice as they are shipped in commerce without changing this apparatus? A. No. [1441]

Q. What changes would you have to make in the apparatus in order to manufacture commercial size blocks of dry ice?

A. Well, this, like the preceding patent, shows no inlet. There is an outlet which can be made of variable capacity by withdrawing the cap marked 13. You probably would not want to use a pipe stem mold in there, which is just one of many devices that may be put in a standard mold container such as that one marked by — let's see the number — No. 5 in Fig. 2.

Q. Professor, do you know of any dry ice products on the market or that have been on the market that could be made in this mold without change, except the pipe stems described in this patent or these caustic pencils that have been referred to here?

Mr. Foster: That is objected to as indefinite. I don't understand it. Possibly the witness does.

The Witness: I don't understand it.

Mr. L. S. Lyon: I think the question is perfectly plain.

The Court: Read the question, please, Mr. Reporter.
(Question read by the reporter.)

(Testimony of William Howard Clapp)

The Court: You may answer.

A. The pipe stems are not made of dry ice.

Q. By Mr. L. S. Lyon: Well, I understood you to say you could make pipe stems out of dry ice, following this patent. Did I misunderstand your testimony?

A. I did not intend to make any such statement.

[1442]

The Court: Well, it is just that you are talking about two different things. You mean the dry ice in the form of pipe stems; and there was some testimony that those were used for local anesthesia by medical men.

A. No; that was the pencils as described in the Julius and Flemming patent.

Q. Couldn't you make a pencil out of this, instead of of pipe stem, in this mold?

A. Using a different form of mold.

Q. Pardon? A. Yes.

Q. By Mr. L. S. Lyon: But other than that, you do not know of any commercial dry ice product that could be made in this device without changing the device?

A. No. In most of these cases you would probably change proportions.

Q. Well, you would have to do more than change the proportions in this Gaylord device in order to make anything else, wouldn't you? A. I said so.

Q. And you have referred to an outlet for the gas. Would you not have to incorporate some outlet which is not shown in the patent if you were to discharge the gas from the pressing chamber while the material was being pressed? A. No, I don't see why.

(Testimony of William Howard Clapp)

Q. What outlet would you use for that purpose,—what [1443] outlet shown in the patent?

A. The patent states on withdrawing the plug 13 the gas may be permitted to escape.

Q. Where you are compressing the material in front of the barrier 21, the aperture plate 14, I think the number is, there would be no provision for the escape of gas, would there? There is none shown in this device.

A. Would you read the question?

(Question read by the reporter.)

Q. If the question is not clear, Professor, I will be glad to restate it.

A. The only way gas could escape would be going down through the press block and out at the outlet at 13.

Q. Have you sufficient experience and knowledge in the manufacture of dry ice to know whether or not a gas outlet limited in that manner would be sufficient and satisfactory?

A. I would not think it would be the best way to do it, if you wanted to get solid blocks in which the gas had been quite excluded.

Q. You don't actually know of, or are not sufficiently informed, to have any definite opinion one way or the other, whether it would be sufficient, is that correct?

A. I say it should be possible to mold dry ice by making the changes that I have indicated. I do not say you can make it commercially with that sort of a machine.

Q. Wouldn't you incorporate a gas outlet for the chamber [1444] in which the product was being pressed?

A. That is the chamber D?

Q. Yes. A. Yes, preferably.

(Testimony of William Howard Clapp)

Q. Have you ever observed the manufacture of dry ice in which the ice has been formed and pressed with no gas outlet or means for the escape of gas, except through the block itself?

A. No; I have seen blocks of dry ice which have been compressed under considerable gas pressure. I know they go to pieces.

Q. In this apparatus shown in the Gaylord patent is the dry ice solidified in the apparatus, or is it solidified in some other apparatus and introduced in solid form into this apparatus?

Mr. Foster: The question is objected to as indefinite. It is not directed to the disclosures of this patent, or anything else.

The Court: I did not understand it. Read it.

(Question read by the reporter.)

The Court: You may answer.

A. Neither. It is a device for pressing amber or ambroid.

Q. By Mr. L. S. Lyon: In this device in the Gaylord patent, where is the amber made, in this apparatus, or some other apparatus? [1445]

A. No, the amber occurs in nature. It is put in the mold at d in powdered form. It is heated with elements shown there, 18 in Fig. 1, which certainly would not be done with dry ice.

Q. Will you turn to the Holden patent No. 876,352. Defendants' Exhibit EE-7. This is another machine for making chip ice. What changes would you have to make in this machine, in your opinion, in order to manufacture dry ice in the machine in a practical way?

A. Changes in the proportion of the inlet valve and probably the outlet.

(Testimony of William Howard Clapp)

Q. Any others? A. No.

Q. Will you identify for us the inlet valve which you say would have to be changed?

A. This is a Corliss type valve, shown in sections, in 5 and 6.

Q. What changes would have to be made in that valve?

A. I would substitute a regular inlet with a nozzle, as is used in CO² devices.

Q. Would any change have to be made in the position of that inlet to enable you to manufacture dry ice practically in this machine, do you know, if you have an opinion?

A. This machine is shown as a horizontal machine. Preferably I would put an inlet at the top. If we took one of these cylinders and considered it as a vertical cylinder, [1446] I think the position of the inlet would be all right.

Q. Among other things then you would stand this machine on end, is that right?

A. That's right, which it could be, around this way.

Q. Can you tell us, if no change is made in the position of the inlet, and the machine was set up horizontally, as shown in the patent drawing, what success you would have in manufacturing successive blocks of dry ice in the machine?

A. I think it would be very effective.

Q. Have you given any thought to whether or not the bottom inlet for liquid CO², in the relative position there shown, would function for the operation of the machine with successive blocks?

A. Yes, I think it would. I would prefer to incline it toward the forward end of cylinder 4.

(Testimony of William Howard Clapp)

Q. Wouldn't the inlet freeze up along with the block in the machine? A. No, I don't believe so.

Q. Have you given any thought to that? Are you making that as a statement that it would not?

A. Well, I was thinking of the outlet of the patent in suit, which comes out through the position occupied by the press block. [1447]

Q. I am referring now to the inlet here, an inlet introducing the liquid CO₂ into the bottom of the machine, as to what would happen if you did that, and then tried to make a succession of blocks in the machine?

A. You might get a plug of snow in the block, and as soon as the valve is opened it would blow it out.

Q. Have you ever had any experience with a machine having a bottom inlet for the liquid CO₂, in which you are trying to make blocks of dry ice? A. No.

Q. Would you have to make any change in the gas outlet shown in the Holden patent to operate the machine practically for the manufacture of dry ice blocks?

A. You might want to put a valve on it, or proportion it according to the inlet and capacity of the apparatus.

Q. Can you tell us what you would need to do? You have said you might want to do these things. Can you tell us what in your opinion should be done?

A. No dimensions are given in this drawing. These things are all relative.

Q. Not having seen a machine of this type actually as it would be made for the pressing of chip ice — I don't know whether you can answer the question or not — do you think that you could take such a machine, as it would be made for the manufacturing of chip ice, and bring it into [1448] a factory and operate the machine success-

(Testimony of William Howard Clapp)

fully in the manufacture of dry ice, without making a change in the gas outlet? A. No.

Q. You probably would have to, would you not?

A. In size, do you mean?

Q. You would have to at least change the size?

A. You might.

Q. How about these perforated liners, or the perforated liner in this machine? Do you think you could leave that in there and successfully manufacture dry ice blocks?

A. No proportion is given to the openings in these liners at all. The space between the liners and the cylinder, pressing cylinder, is a jacket space.

Q. Then would it depend upon these proportions whether you would have to remove that perforated liner or not to successfully operate the machine for the manufacture of dry ice? A. I don't believe so.

Q. What was the point of your telling us that there are no proportions given or sizes given?

A. Speaking of the pipes, the inlets and outlets?

Q. I am speaking about the perforated liner.

A. Yes.

Q. You don't think it would make any difference if the perforated liner was in the machine or not if you tried [1449] to manufacture dry ice in the machine?

A. I believe those perforated liners are shown in the following patents, are they not?

Q. They are shown in patent No. 730,018, according to line 44, page 2 of this patent, and they are shown in patent, 1,054,772.

A. Yes, in Figures 9 and 10.

Q. Have you given any thought as to whether or not those would interfere in any way with the manufacture

(Testimony of William Howard Clapp)

of dry ice blocks if you tried to use the machine for that purpose? A. I have.

Q. Did you make any tests? A. No.

Q. It is your opinion it would not make any difference, or that they should be removed?

A. I don't believe it would make any difference, or that they should be removed.

Q. Will you turn now to the Holden patent just mentioned, 1,054,772, Exhibit EE-10. Does the testimony you have given with regard to the necessity for changing the inlets and outlets in the prior Holden patent just mentioned apply equally to the apparatus shown in this patent 1,054,772, if you attempted to operate the latter for the manufacture of dry ice blocks?

A. I believe I noted a difference in this patent from [1450] the preceding one in that the sliding gate is shown as having a provision — that is, No. 76 in Figure 2, in sections; the gate is shown as having a provision for the withdrawal of any water which may get behind the piston, and no such provision is made or described for the press in the preceding patent.

Q. Do you mean by that that it would not be necessary to make any change in this apparatus of this patent 1,054,772, for the escape of gas, if you were attempting to manufacture dry ice blocks with the machine?

A. Other than those that I described in the preceding patent?

Q. Yes. A. No.

Q. You would have to make those same changes, would you not, in this apparatus?

A. I said changes in inlet and outlet proportion?

Q. Yes. A. Yes.

(Testimony of William Howard Clapp)

Q. Will you turn to Osborne patent No. 1,104,920, which is Defendants' Exhibit EE-11. This is an apparatus for making water ice, is it not? A. It is.

Q. Did you ever see this apparatus? A. No.

Q. Did you ever have any experience making water ice [1451] in an apparatus of that kind? A. No.

Q. As I understand it, your testimony applies to all these references other than Stastney; you haven't had any experience in trying to make dry ice with any of them?

A. No.

Q. In order to make dry ice with the apparatus of this Osborne patent, what changes would you have to make, in your opinion?

A. I would plug up these holes 13, that are shown there. I would take off that spraying device and substitute a nozzle at 15; and otherwise I wouldn't make any change.

Q. Wouldn't you have to make a provision for the gas outlet in the press?

A. It goes out through the pipe 9.

Q. In the press? I think you misunderstood my question.

A. No, we are snowing in chamber 6.

Q. The pressing is done down below the slide 24, is it not? A. Yes.

Q. And there is no provision for the gas outlet from that chamber during the pressing, is there? A. No.

Q. Wouldn't you have to have one?

A. No; that is, a lot of the preceding art speaks of [1452] compression of the snow without providing a gas outlet.

(Testimony of William Howard Clapp)

Q. Have you any experience with the production of blocks of dry ice under those conditions?

A. You probably would have a better block if you made provision for gas to escape during the pressing of the snow, which might be done with a cylinder that leaks a little bit — I mean a piston that leaks.

Q. You know from your technical knowledge and what you have heard here in the court room that provision should be made so that the unsolidified CO₂ can escape and not be pressed into the block, to avoid the block being unstable or exploding; isn't that your understanding?

A. Well, that is certainly true if the material is compressed with a relatively high pressure of gas in the chamber; but if the pressure is allowed to drop down to atmosphere and then the snow is compressed, I don't believe that the additional withdrawal of the gas would amount to much.

Q. You say that you would plug up these holes 13 in this Osborne device. Why would you do that?

A. Well, they are not needed in the operation.

Q. Would they interfere with it?

A. Oh, I think that that whole bustle pipe 11 would probably fill with snow and it would be melting, and it would not be as efficient.

Q. Would you retain this air system and the apparatus [1453] for circulating air in this device? A. No.

Q. If you were going to use the device for the manufacture of blocks of CO₂? A. No.

Q. What would you do with that?

A. Why, I would connect the outlet 9 to the exhaust end or the recovery end of the carbon dioxide system.

(Testimony of William Howard Clapp)

Q. Then, you would substitute a CO₂ compressor system for this air-circulating system as shown in this patent?

A. Yes. I would not attempt to make carbon dioxide ice out of air, and so —

Q. As a matter of fact, you would have to dispense with this circulation of air that is described in this Osborne patent in order to make CO₂ blocks practically, would you not?

A. Yes, sir.

Q. Will you turn to this Stastney patent, 1,288,255, and particularly, first, I want you to make some comparisons of this model, Defendants' Exhibit II, with the specifications and drawings of this patent. [1454] In mentioning differences yesterday, I do not believe you said anything about these tie rods on this model at the four corners.

A. I believe I said that they took the place of the bolting device shown as No. 19 on the patent.

Q. And how much pressure do you think you could safely rely upon withstanding if you relied on those wing bolts, thumb bolts, as shown in the Stastney patent?

A. It depends on the size of the bolts and the size of the cylinder.

Q. Did you ever see a device like this Stastney patent, a soap manufacturing device?

A. I never did.

Q. Have you ever had any experience in designing or operating apparatus for the manufacture of soap?

A. I made a few designs, tentative, for Proctor & Gamble down here a number of years ago. It did not involve a press.

(Testimony of William Howard Clapp)

Q. What do you think would be the probable dimensions of the Stastney device if it was made for the purpose of molding and cutting of soap, if you have any opinion?

A. It would depend upon the capacity wanted. I should say that we might make this inner rectangular chamber 6, oh, say, 14 or 15 inches wide and 3 feet long.

Q. You think that is about what it would be in the soap business?

A. Well, if you wanted a greater capacity, you might [1455] prepare for it.

Q. I understand that, but within the requirements of the soap industry, will you tell us the approximate sizes?

A. Yes; I think that would be a reasonable size.

Q. Assuming that you could find one of the devices shown in this Stastney patent which had been manufactured for use in the molding and cutting of soap, is it your testimony that, in your opinion, you could take that device and without change take it into a factory and operate it practically for the manufacture of CO² blocks?

A. Yes. Changing the size of the inlet, now.

Q. I said, without any changes.

A. Without any change; no.

Q. What pressure would the apparatus be designed to withstand if the apparatus was of the type that it would be made for molding and cutting soap? Can you tell us that?

Mr. Foster: Objected to as indefinite unless the density and quality of the soap desired is specified in the question.

Mr. Miketta: Further objected to as referring to a machine of a certain type, not the machine illustrated in the drawings.

(Testimony of William Howard Clapp)

Mr. L. S. Lyon: I will limit it to the machine shown and described in this Stastney patent. That is what I intended it to be.

The Court: With that limitation, you may answer.

[1456]

A. I don't know what pressures would be applied to solidify soap under those conditions. It might be only 10 pounds per square inch and it might be 50 or more pounds per square inch. There would be no difficulty in designing a machine as shown here to withstand either pressure.

Q. By Mr. L. S. Lyon: That is not my question, Doctor. My question is, in the first place, do you know what pressures are encountered or would be encountered in an apparatus of this kind if designed for and used for the molding and cutting of soap?

A. Not definitely; no.

Q. You say it might be 50, but it might not. You haven't any basis for your statement that it might be as high as 50, have you?

A. No. I am thinking of the consistency of the liquid and the desire to hold it together during this solidifying operation when the constituents give up their water, their liquid at a different rate. I should think 50 pounds might be high enough; it might be a hundred.

Q. It might be a great deal higher than any pressure that ever is encountered in such an actual operation, so far as you know?

A. It might be.

Q. 50 pounds might be a great deal higher than any actual pressure that the device is called upon to withstand when used for molding and cutting soap; isn't that correct, [1457] so far as you know?

A. That might be.

(Testimony of William Howard Clapp)

Q. Well, do you know whether or not such a device constructed for and intended for use in cutting and molding soap could safely be brought into a plant operated for the manufacture of CO² blocks without any reinforcement or any additional additions to it to withstand CO² pressures?

Mr. Foster: That is objected to unless the type of CO² blocks and solid carbon dioxide it is contemplated to be formed is specified in the question.

Mr. L. S. Lyon: I am talking about all of them.

The Court: Make it any type. You may answer.

A. There is no difficulty in the design of that device.

Mr. L. S. Lyon: Will you read the question to the witness, please? I move to strike the answer.

The Court: It may be stricken.

(Question read by the reporter.)

Mr. Miketta: That is objected to, your Honor, as calling for a conclusion of the witness regarding a hypothetical machine. He does not state its state of decrepitude, age, or thickness of walls is not known.

A. If I had ever seen a Stastney machine, I think I could answer that question quite definitely.

Q. By Mr. L. S. Lyon: But never having seen one, you can't very well answer, is that correct?

A. No; I have to hedge. [1458]

Q. Well, I don't want you to hedge, Doctor. There was an addition incorporated in Exhibit II as a safeguard because of the pressures developed in the demonstration here in court which does not appear in the Stastney patent, and that is in the presence, for one thing, of that gasket under the top plate, isn't that right?

A. Well, as an engineering device there is certainly a gasket under the top plate 18.

(Testimony of William Howard Clapp)

Q. Well, you do not see any in the drawing, do you?

A. No; I don't see any in the drawing.

Q. You do not see any described in the specification, do you? A. No.

Q. And you would not need one necessarily for the molding and cutting of the soap, would you?

A. Yes; I think you would.

Q. Why?

A. Well, you would have water leaking out when you started to press all around the outside edges of the device.

Q. Have you ever seen the operation of the apparatus in the soap plant? A. No; not this apparatus.

Q. Do you think that they objected to water flowing around the apparatus in a soap plant, or don't you know anything about that?

Mr. Foster: Objected to as calling for a conclusion of [1459] the witness.

A. I think anyone around a plant would object to having sloppy conditions of operation.

Q. By. Mr. L. S. Lyon: Have you ever been in a soap plant? A. Yes.

Q. Wasn't there water flowing around the apparatus?

The Witness: Read the question, please.

(Question read by the reporter.)

A. No; very clean conditions.

Q. But you did have to have this gasket or use a gasket on this model, Exhibit II? And I show you the gasket here. A. Yes.

Q. In order to guard against the pressures that were developed in the demonstration here in the courtroom, isn't that correct? A. No.

(Testimony of William Howard Clapp)

Q. Why did you have it on there?

A. I didn't want to go to the expense of machining up surfaces to the accuracy required to make a metal-tight seal.

Q. You mentioned that you would have to change the Stastney apparatus that had been built for molding and cutting of soap if you were going to try to use it for the manufacture of dry ice by making a change in the inlet. What change would you have to make in the inlet?

A. I would put a nozzle in there, preferably between the valve 10 and the device. [1460]

Q. What type of valve is shown in this Stastney patent here, can you tell, at 10?

A. No; I don't think it tells.

Q. You are unable to tell from looking at the drawing what type of valve that is, the valve 10?

A. This looks like a plug valve.

Q. Can you use a plug valve in controlling the inlet line to an apparatus in which you are solidifying liquid CO², do you know?

A. No; probably would not.

Q. Probably would not use it, isn't that right?

A. No; I wouldn't say so.

Q. What did you mean "probably would not"?

A. Because there would be other valves which would be more effective.

Mr. Foster: Just a moment. May the witness finish his answer, please?

The Court: Yes.

Mr. Foster: Had you finished?

Q. By Mr. L. S. Lyon: Do you know whether or not plug valves are used in the CO² industry?

A. No; I wouldn't think they would be.

(Testimony of William Howard Clapp)

Q. Why not?

A. Well, because there are other valves which are more effective.

Q. Don't you know that a plug valve would freeze up and [1461] block off?

A. It would if we cracked it down to a very small opening.

Q. It is customary, isn't it, as you understand the CO² manufacturing industry or dry ice business to either use a nozzle or no valve at all?

A. To introduce the liquid carbon dioxide into the cylinder through a nozzle.

Q. Or else flow it in for the triple point operation with no nozzle or obstruction at all, is that right?

A. No; I wouldn't say so.

Q. Do you know?

A. As I understand your meaning of triple point operation, that we are letting this flow in to the cylinder under pressure conditions such that the material enters as a liquid?

Q. That is right. A. Yes.

Q. This much is true, isn't it, Professor, in your opinion, that this Stastney apparatus, when you brought it over from the soap factory, one of the things you would have to do to it if you were going to operate it for making CO² blocks would be to change that valve 10; you would not expect to find a valve on a soap molding —

A. No.

Q. — and cutting device that would be adapted for CO² [1462] operation?

A. No; and we didn't put one on our model.

Q. You have a different type of valve on your model, haven't you, from what is shown in this Stastney patent?

(Testimony of William Howard Clapp)

A. We connected this directly to the outlet of the carbon dioxide tank.

Q. And eliminated the valve 10?

A. Had the valve at the tank.

Q. Yes. You would also have to make some change in the size of this inlet, wouldn't you, as shown in the Stastney patent and as it would exist in a device for cutting and molding soap?

A. Yes, yes.

Q. And you would also have to make some change in the outlet at the top in this stop-cock arrangement?

A. Yes.

Q. You could not use that successfully for venting your gas if you were trying to make CO² blocks in the device?

A. We used a valve here which would operate pretty much the same as a stop cock. It worked effectively.

Q. But it is not a stop-cock, is it?

A. It is not a stop-cock; no.

Q. And you have changed the size of that gas outlet in your model as compared with this drawing of the Stastney patent, haven't you?

A. Relative to the cylinder size; yes. [1463]

Q. And relative to the inlet size? A. Yes.

Q. In the Stastney patent the gas outlet is only a fraction of the area of the inlet, isn't that correct, a small fraction?

A. Yes.

Q. What are the relative areas of the outlet and inlet in this model that you demonstrated here in court?

A. Well, the outlet is a $\frac{3}{8}$ -inch pipe, all that piping is $\frac{3}{8}$ -inch, and that is the approximate internal diameter size, and the inlet for liquid CO² is, I believe, $\frac{5}{32}$ of an inch.

(Testimony of William Howard Clapp)

Q. When you brought this device over for the manufacture of CO^2 from the soap plant that was made under this Stastney patent, you would also have to make a change in the proportions and the size of the piston, would you not? A. No.

Q. Could you use a piston of the size and the characteristics shown in this Stastney patent practically for the manufacture of CO^2 blocks?

A. I see no reason why not.

Q. In the Stastney patent what fluid is used for actuating that piston? A. Compressed air.

Q. What would happen in a CO^2 manufacture if you tried to use compressed air in the manner shown in this Stastney [1464] patent?

A. It would not be very effective.

Q. What would be the matter with it?

A. Well, if it leaked beyond the rings of the piston at all, it would blow up through the compressed ice and that would not be good.

Q. You did not use compressed air in your demonstration here in the court room, did you?

A. No. We used CO^2 gas.

Q. And there is no description or no instruction to do that in this Stastney patent? A. No.

Q. If you were trying to employ this Stastney apparatus in the manufacture of CO^2 blocks, how would you get the block out after it was formed, if it was formed?

A. Using this air means on the one piston would not be so good. We got our little block out by just releasing a little pressure into the pipe 16 and raising the block; but that would not be as effective as if we had a piston rod which was a controllable means. It is just a question of means of operating that piston.

(Testimony of William Howard Clapp)

Q. Practically, if you were attempting to use a device for the manufacture of CO² blocks, you would have to add some controllable hydraulic means; you could not rely on just flowing air behind the piston, could you?

A. I expect it could be done, but I wouldn't say it was [1465] the preferable way to do it.

Q. You are quite sure it would not be satisfactory, aren't you?

A. Well, piston rings wear and eventually, if air leaked up through, why, that is objectionable.

Q. What would be the result of applying air to the cold wall of the chamber behind the piston if you were using this device in the manufacture of solid CO² blocks?

A. You are thinking of the heat effect, the thermal effect.

Q. Would not moisture condense on the wall of the chamber and freeze?

A. On the inside of the chamber?

Q. Yes.

A. It probably would. [1466]

Q. Then how would you get your piston down to start your next block in this apparatus as shown in the Stastney patent?

A. It would depend upon how much moisture froze on the walls. If this device was down in Imperial Valley, I don't know as there would be enough moisture freeze on the walls to make any difference.

Q. Well, you don't know one way or the other, do you, about that? A. What?

Q. You are just speculating about that, aren't you?

A. I have stated that I don't think this would be the most effective means of compressing the block as a means of operating the piston.

(Testimony of William Howard Clapp)

Q. Well, you haven't answered my question. If moisture did condense on the walls, the inner wall of this chamber behind the piston, when you were forcing the piston up to eject the block or to press the block, then there would be a probability or a possibility of the piston freezing, wouldn't there? A. It might.

Q. At least, there would be a problem of getting it to come back down, wouldn't there?

A. It would depend upon the humidity of the air and the length of time it took to do the pressing.

Q. This patent does not show any way of getting the [1467] piston down so as to start another block, does it, after you have made one block? A. No.

Mr. L. S. Lyon: If your Honor please, if you would care to have our adjournment, I think the witness and I would both be better off before we take up another patent.

The Court: Yes. Very well.

(Short recess.)

Mr. Foster: We have a witness here from out of town, whose testimony would take only a few minutes. I think it highly probably, if I make an offer of proof as to what the witness I believe will testify to, that plaintiffs' counsel will stipulate if called he would so testify. May I make such offer at this time, your Honor?

The Court: Yes.

Mr. Foster: Would the court prefer that the witness leave the court room while I make the offer?

Mr. L. S. Lyon: That is not necessary, your Honor.

Mr. Foster: The witness, W. L. Benson, if called as a witness on behalf of defendants, would testify that he made the two sheets of drawings which are in evidence

as Plaintiffs' Exhibits 3 and 4, and that all of the legends and lines thereon were made by him, and that the initials W.L.B. appearing upon the drawings, are his initials; that he made the drawings somewhat reductantly, being extremely busy, because he could find no draftsman to take to the [1468] plant to make them;

That there appears upon these Exhibits 3 and 4, in red, the legends "Vent Pipe" and "Valve", and that there are appearing upon the original of the drawings from which these Exhibits 3 and 4 were made, changes indicating the presence of vent valves to atmosphere, on both the H.P.M. and Frick presses, and legends appropriately identifying them as vent opening or vent line; and that these legends were not upon the original drawings, of which Plaintiffs' Exhibits 3 and 4 are prints, nor were the vent openings indicated, for the reason that when he was making the drawings he did not consider them important to a showing of an overall illustration of the machine, and they were not put on for that reason, and through oversight. That the vent openings and vent pipes now indicated upon these original drawings of which Plaintiffs' Exhibits 3 and 4 are prints, before the additions were placed thereon, were on the H.P.M. press when it was installed, and have been continuously on the press ever since, and now are there, and have been continuously used for venting the chamber to atmosphere before pressing. That the air vents appearing upon the drawings now as appearing upon the Frick press, were there when he first saw the Frick press, have been there ever since, and are now, and have been continuously used for venting the chamber to atmosphere before pressing.

That the vents were on both machines at the time plaintiffs' representatives had their inspection of the two [1469] machine.

In one other respect Defendants' Exhibit 4 of the H.P.M. press was not correct, that is, to scale, and that the lower platen was not shown to be approximately $1\frac{3}{4}$ inches thick, and the chamber should have been shown a little more accurately to scale, being 20 by 20, horizontal dimension, with the lower plate or boss about $\frac{1}{4}$ of an inch less in horizontal dimensions.

That the note appearing upon Plaintiffs' Exhibit 4, "Open chamber while pressing", note 3, meant that the chamber was open to atmosphere through the vent pipe and the lowering of the platen while pressing operation was performed; and the note appearing upon Plaintiffs' Exhibit 3, which he placed thereon: "Upper ram open during pressing period", meant the upper platen of the Frick press was raised, permitting the escape of gas during the operation of that press.

I might state, your Honor, that the drawings with the changes I have referred to, which are now present upon the original drawings I have in my hand, were known to plaintiffs, prints of the original drawings having been handed to them.

Mr. L. S. Lyon: May I inquire if this witness is not a defendant in this case?

Mr. Foster: He is one of the defendants. At the time he made the drawings, he was not one of the defendants, because the supplemental complaint had not then been filed. [1470] He was then an employee of the defendant corporation.

Mr. L. S. Lyon: It seems to me that the statement on the matter, which counsel for the defendants seems to think so important, they should not ask us to stipulate to. I don't understand he is asking us to stipulate that those are the facts. If the defendant could remain in attend-

ance tomorrow, we will consider this rather long statement of counsel and advise the court as to whether we care to cross-examine or not. I am willing to stipulate, if we have that right to cross-examine, if we find we need it, that the defendant would so testify, without stipulating to the facts.

Mr. Foster: That is all I ask; I am not asking you to stipulate that they are facts, Mr. Lyon, but Mr. Benson, being available in court, and put under oath, would so testify. Is that stipulated to?

Mr. L. S. Lyon: No, it is not stipulated to, except, as I say, with the reservation that the defendant will remain in attendance, and then we may consider this statement when we get the transcript, and if we desire, the defendant will take the stand for cross-examination.

The Court: Is Mr. Benson in the court room?

Mr. Foster: Yes, he is here.

The Court: Will you be available tomorrow morning at 10 o'clock?

Mr. Benson: I can. [1471]

Mr. Foster: I might state this, your Honor; the reason for my asking the offer at this time, I did not like to interrupt Mr. Lyon's cross-examination, but this witness has just brought in yesterday a carbon dioxide well, late yesterday, and has impressed upon me the necessity or desirability of his being back to the Niland area as quickly as possible. While I appreciate Mr. Lyon's desire, and probably would have a similar desire were our positions reversed, for opportunity to cross-examination, I wonder if he would feel that he could give that cross-examination now. Would it inconvenience you greatly, Mr. Lyon?

Mr. L. S. Lyon: Your Honor, I am very anxious to use the time, and I am going to be here until tomorrow night with the Professor, and complete his examination.

The Court: When do you plan to be through your case?

Mr. Foster: The direct examination?

The Court: Today is Wednesday.

Mr. Foster: Assuming this offer of proof eliminates the necessity of examining Mr. Benson on direct examination, then the remaining direct examination will require, as nearly as we can estimate, not to exceed three hours.

The Court: If this man has a well coming in, would it not be more convenient for you to come back here next Tuesday? Couldn't we just give you time to consider it, and then if you want to cross-examine him, he can be notified, and he can be here Tuesday? [1472]

Mr. L. S. Lyon: We will let them know. Maybe we won't want him. We can notify counsel.

The Court: Did you hear the statement Mr. Foster made here in open court?

Mr. Benson: Just now?

The Court: Yes.

Mr. Benson: Yes, I did.

The Court: Are all those statements true and correct?

Mr. Benson: Yes.

The Court: Will you swear this witness, please, Mr. Hooser?

(W. L. Benson was here sworn.)

The Court: Do you state that all the statements made by your counsel here are true and correct?

Mr. Benson: Yes, sir.

The Court: You will be excused until next Tuesday, unless you are notified you are further excused. You will be here at 10 o'clock next Tuesday morning prepared to be cross-examined by counsel, if they need to cross-examine.

ine you. If they don't they will let your counsel know before Friday morning, or by Friday morning, and your counsel will notify you. Otherwise, make your plans to be here Tuesday at 10 o'clock.

Mr. Foster: Will there be court Tuesday?

Mr. Miketta: That, I believe, is the 30th, and ordinarily it is a holiday. [1473]

The Court: I guess we can't hold court that day. Make it Wednesday, then. Is that satisfactory?

Mr. Benson: Yes.

Mr. Foster: What I was referring to in my outline of the testimony of Mr. Benson are these original drawings. May I have these marked, your Honor, as defendants' next exhibit?

The Court: They may be marked.

Mr. Foster: The H. P. M. press Defendants' Exhibit—

The Court: LL.

[Note: Defendants' Exhibit LL will be found in the Book of Exhibits at page 1577.]

Mr. Foster: The second one, being the Frick press. Defendants' Exhibit MM.

[Note: Defendants' Exhibit MM will be found in the Book of Exhibits at page 1578.]

Mr. Miketta: May the record also show, your Honor, that Defendants' Exhibits LL and MM were respectively Exhibits A and B appended to an amendment to the answers to the interrogatories filed in this court?

Mr. Foster: Several days before we began the trial.

Mr. Miketta: Yes.

Mr. Foster: Thank you, Mr. Lyon, for permitting the interruption.

The Court: You may proceed.

(Testimony of William Howard Clapp)

Cross-Examination

resumed.

Q. By Mr. L. S. Lyon: Will you turn, please, Professor, to Slate patent 1,546,681, Exhibit EE-15? There is no pressing means disclosed in this patent; is that correct? [1474]

A. There is no pressing means disclosed.

Q. And there is only one pipe which will serve both for the inlet of the liquid CO₂, and the gas outlet; is that correct? A. That is correct.

Q. Have you ever seen a device such as shown in this Slate patent? A. No.

Q. Have you ever tried any experiments to see whether you could operate it, and what results you could get?

A. I testified I had never seen the device, so I could not carry on any experiments with it.

Q. What is this compressor for, shown in drawing, No. 17?

A. It is for the purpose of returning the exhausted gases after injection into the tank, or place of origin, from which they came. It might be a manufacturing plant, represented by No. 2 in the drawing.

Q. Does it operate constantly during the performance of the apparatus?

A. The patent description stating, starting the compressor first, and then opening the valves 5 and 3, and when a sufficient amount of liquid carbon dioxide has gotten into the device, so that we may know that it is liquid, as represented by the drawing, then valve 5 is closed and the compressor exhausts from the snow tank 14 back to the [1475] source of supply No. 2.

(Testimony of William Howard Clapp)

Q. Is the description in this patent adequate, so you understand how the device is to operate in all respects?

A. Yes, sir.

Q. And what it amounts to then is a snow tank with this pump and supply of CO₂; is that correct?

A. I don't get the import of the question. Will you read that question?

(Question read by the reporter.)

A. That and the piping and valves are the elements of the combination.

Q. Will you turn to Slate patent No. 1,546,682, Exhibit EE-16. There is no pressing of the solidified CO₂ in the apparatus shown in this patent; is that correct?

A. There is no pressing shown, yes, sir.

Q. Will you turn now to the patent to Kochenderfer, No. 1,631,037, which is Exhibit EE-17? This is a patent for use with boiled garbage, is it not?

A. Yes, sir.

Q. Did you ever see a garbage apparatus of that kind?

A. I never did.

Q. Did you ever make any experiments with such an apparatus upon garbage?

A. I think I answered that question the first time.

Q. According to your understanding of what this device would be, if actually built for handling garbage, what would be the diameter of the chamber 4? [1476]

A. It would depend upon how much garbage you were handling. It would certainly be a large device.

Q. Can you give us your opinion as to what that diameter would be probably?

A. It might be anywhere from 2 to 3 or more feet in diameter.

Q. In your opinion, if the device was built for the purpose of operating on dry garbage, could you take that

(Testimony of William Howard Clapp)

device into a plant and use it practically for the manufacture of dry ice blocks without making any change in the device? A. No.

Mr. Foster: That is objected to as assuming facts not in evidence, and contrary to the evidence; in the use of the term "dry garbage".

Mr. L. S. Lyon: I should say boiled garbage instead of dry garbage. Excuse me. What changes would you have to make, in your opinion; Professor?

A. If we were to use an inlet at the bottom of cylinder 4, as shown in Fig. 2, where the pressing plunger has been shown in its elevated position, as raising the material to the top, I would put the inlet above the position of the ram when it is in its downward position; that is, the ram 3. It is now shown in an upward position. I don't see any other relevant changes.

Q. Is there any satisfactory gas take-off shown in the [1477] patent drawing, or description in the specification, or would you have to provide such?

A. The patent doesn't disclose anything about the proportions of the openings there at the top. There is an annular groove in the cylinder marked 31. There is an annular groove in the closure cap marked 30, and these grooves coincide when the closure cap is in sealed position on the top of the cylinder 4. The patent states that there is an annular space between the cylinder walls and the lower projecting lip of that closure cap, but it says nothing about the size of that space.

Q. That structure—

Mr. Foster: Just a minute. I don't believe the witness had completed his answer about the fluid outlet.

The Court: You may continue.

(Testimony of William Howard Clapp)

A. So far as I can see from the language of the patent, the outlet for the gas through what we might take as an opening 25 in Fig. 1, I believe might be entirely unrestricted up to that outlet.

Q. By Mr. L. S. Lyon: Is that clear from the patent, or is that just a possibility? Is the patent indefinite on that?

A. The patent doesn't disclose the size of the spaces there, nor the size of the outlet pipe.

Q. And it does not actually disclose definitely any of that structure, does it? A. No. [1478]

Q. What is the function of the sluice gates 24, as described in this Kochenderfer patent?

A. I haven't read the claims of it.

Q. I think you misunderstood me, Professor. I said the sluice gates 24; not the claim 24.

A. I beg your pardon. I have a bronchial cold, and it has affected my hearing. I have to apologize.

Q. I am sorry. They are shown in Fig. 1.

A. 24 is a valve, possibly a gate valve, for opening and permitting the material to flow down into the space at the top of the cylinder 4.

Q. These are open only when the closing head is open, isn't that correct?

A. When the closing head is raised above the cylinder?

Q. Yes. A. Yes.

Q. You could not feed liquid CO_2 into the apparatus successfully through that arrangement, could you?

A. No.

Q. It would be open to the atmosphere?

A. I didn't propose to.

(Testimony of William Howard Clapp)

Q. What would you feed the liquid CO^2 through into this apparatus?

A. I believe I testified at first that I would put an inlet opening for the liquid CO^2 above the one shown for the withdrawal of the water. I believe it is marked 36, Fig. 1; [1479] and above the level of the ram, when it is in its lowest position, shown by Fig. 5 in Fig. 1.

Q. As described in this Kochenderfer patent, the top garbage liquid outlet, which carries the legends 30, 31, 32, 33, 34, connects to a common pipe 39, with the bottom garbage liquid outlets 35, 36 and 38, is that correct?

A. That is right.

Q. You couldn't use that common piping system both as an inlet and an outlet, if you were trying to make CO^2 blocks in this device? A. No.

Q. You would have to change those?

A. Yes, sir.

Q. Are there any other changes that occur to you that you would have to make in this Kochenderfer device in order to use it practically for the manufacture of CO^2 blocks, or dry ice blocks?

A. I have never seen the machine, and if you could show me the machine I could tell more nearly. I have never seen one of these machines yet, that was built as the drawings in the patent represent.

Q. Do you mean you have never seen any patented machine that corresponds to the patent drawings?

A. Completely, no.

Q. Do you think that is the fault of the inventors or the draftsmen, or the man that makes the machine?
[1480]

A. It may be my limited experience. I couldn't say.

(Testimony of William Howard Clapp)

The Court: Just blame it onto the lawyers.

A. Thank you, your Honor.

Q. By Mr. L. S. Lyon: Now, will you turn to Slate patent 1,643,590, which is Defendants' Exhibit EE-18. Have you studied the machine and the operation of the machine, as described in this patent, from the standpoint of being able to tell us whether it is operative or not, as described?

A. Yes, I believe it can be made to operate.

Q. But only by the addition of some external source of power, is that your opinion?

A. The patent doesn't state that he relies entirely on the power derived from the expansion of these gases from the liquid, to drive the machine.

Q. That is not my question, Professor. I am sure you did not intend not to answer my question.

A. I said I believe I could make it operate, and I certainly would put a belt drive on that fly-wheel from a motor geared down low.

Q. If you put a belt drive on that fly-wheel would it any longer be a fly-wheel? A. Certainly.

Q. Does the patent state that there is to be any power applied to this fly-wheel from an outside source?

A. No.

Q. But it is your opinion there would have to be some. [1481] is it not?

The Court: Look at page 3, the sentence beginning line 106, and particularly 107 "or whether by other means (not illustrated)". A. Yes.

Mr. Foster: Is that line 107?

The Court: 107, page 3.

A. Which I read into the record, I believe.

(Testimony of William Howard Clapp)

The Court: Did you read that in? A. Yes.
[1482]

Q. By the Court: Doesn't that indicate that he did not rely entirely upon the— A. Yes.

Q. —utilizing the energy from the expansion of gas from the liquid in the compression chamber?

A. Yes. In line 104: "to drive or to continue to drive", from which I take it that he might get some of the energy for operation from the expansion of the gas, liquid to gas, and some from other sources.

Q. He says, "continue to drive." He means he might start up with something else, some other means, and that that might keep it going, doesn't it?

Q. By Mr. L. S. Lyon: Will you refer to the paragraph commencing at line 35 on page 3, the first column, and read that, Professor, and tell us what you understand from that as to how this machine is to be powered?

A. "Another valuable result of the novel method and machine disclosed is that all of the power obtained by the energy exerted on the piston 18 and applied or transmitted through connecting rods and gearing operatively connecting the piston 18 to fly-wheel 52 represents just so many heat units removed from the converting chamber 5, thereby converting a portion of the liquid carbon dioxide to snow and lowering the temperature of the escaping carbon dioxide gas to be used through the heat exchanger conduit 30, which will in turn lower the temperature of the incoming liquid carbon [1483] dioxide in the conduit 31, and make it possible to run the machine at a lower liquid pressure of the carbon dioxide without danger of evaporation in the conduits leading to the machine and of a resultant freezing of ice in these conduits by such conversion."

(Testimony of William Howard Clapp)

Q. Were they not justified in referring to this as a perpetual motion machine if there is no added power applied to the fly-wheel from an external source?

A. Oh, no; it would not be a perpetual motion machine even if they got the whole source from the liquid carbon dioxide and used no power from outside.

Q. Is your answer—

Mr. Foster: Just a moment.

Mr. Miketta: Just a moment. May the witness finish his answer?

Mr. L. S. Lyon: I thought he had finished. He said "No."

Q. Is your answer based on the fact that you would be consuming CO^2 in the machine?

A. It would be consuming the energy derived from the evaporation of the carbon dioxide to drive the machine.

Q. What determines how much force the piston 18 could exert on the solidified CO^2 in this operation of this machine as described?

The Witness: May I have that question again, please?

The Court: Yes. I would like to have it, too.

(Question read by the reporter.) [1484]

A. Well, the size of the fly-wheel might be one influence on that for doing work, say, on the upstroke, as shown in Fig. 3, doing work on the bottom of the piston, and as they work down there is a tendency to speed up this jim-crank mechanism shown on Fig. 1. and that means that energy is absorbed by the fly-wheel and the size of the fly-wheel would control the resistance to the operation of the piston.

(Testimony of William Howard Clapp)

Q. What would determine what pressure the bottom closure plate 8 would withstand without opening?

A. There is shown in Fig. 1 a toggle device consisting of two arms, 42 and 43, 42 being pivoted on the frame of the machine by pin 44 and arm 42 (43) being pivoted to the bottom of the bell crank lever 8 by pin 41, these two arms being united at about the middle distance there. I am not certain as to what the pin number is from those Figures. As this toggle is put in the raised position, which takes place when the crank arm No. 39 strikes the spring end 48 of this left-hand lever, the effect is to close the toggle arm and to throw the bottom of the bell crank out and pin 41 toward the right and close the cap.

Q. I think you have described the linkage mechanism but I don't think you have told me what determines how much pressure, internal pressure, this cap 8 will resist without opening.

A. Yes. That is regulated by the screw 46 which acts as [1485] a stop so that we can bring this toggle arm up to any desired position before it stops. Of course, if the line connecting those three pins, that is, if it were to become one line, clear up, why, theoretically an infinite force would be required.

Q. Does the speed of rotation of the fly-wheel or the amount of energy stored in the fly-wheel have anything to do with the pressure that this cap 8 will withstand without opening?

A. No. It is supposed to be adjusted to withstand a certain pressure by bringing these arms as nearly into coincidence as may be desirable. The nearer we bring those three pins into a straight line, the higher the pressure required to open the cap.

(Testimony of William Howard Clapp)

Q. Is the cap 8 opened by the pressure built up by the piston in the cylinder, or is it opened mechanically by a timing arrangement?

A. No; it is opened by the pressure built up by the piston against the ice.

Q. The resistance of this cap 8 is independent entirely of the action of the piston in the chamber throughout its travel, is that correct?

A. Yes. It is set to open when there is a definite pressure.

Q. Do you know what that pressure is, or can you approximate it from your mechanical knowledge? [1486]

A. No. The patent doesn't show what pressure is to be employed.

Q. Do you know what pressures are employed in pressing commercial dry ice blocks, or approximately what they are?

A. Oh, it might be a thousand pounds per square inch.

Q. Do you understand that is about what they are?

A. Somewhere in that neighborhood; yes.

Q. Is this structure shown in this Slate patent, in your opinion as an engineer, adapted to withstand such a pressure? A. I haven't seen the machine.

Q. Would you utilize this design for withstanding a thousand pounds pressure? A. Heavens, no.

Q. How much do you think it would withstand?

A. Why, that would be just a guess and it would not be worth anything. I don't know anything about the sizes or proportions of those parts.

Q. Yes. But, to you as an engineer, they are obviously not designed to withstand high pressures like a

(Testimony of William Howard Clapp)

thousand pounds? I am talking now about the mechanism on which the cap 8 depends.

A. Oh, yes; that could be designed to withstand pressures of 10,000 pounds.

Q. Does it appear to be that to you in this drawing?

A. How is that? [1487]

Q. Does it appear to be so designed in this drawing?

A. Well, as I say, I know nothing of the proportions there.

Q. Doesn't this drawing look to you like a proportionate drawing? It may not have any scale on it, or doesn't look like a drawing from an actual machine?

A. No.

Q. Maybe we can shorten this up, Professor. In your opinion, if you have one, could you manufacture dry ice blocks of commercial size practically in the machine of this Slate patent?

A. I believe I could.

Q. Do you think you could? A. I believe so.

Q. Did you ever try it? A. No.

Q. Did you ever see such a device? A. No.

Q. Would you recommend this as a design?

A. No.

Q. Why not?

A. Well, there is a lot of unnecessary cranks and levers and things there for what thing you wish to accomplish. An engineer tries to go to the result he wishes to get in the simplest and most direct way possible.

Q. And you would not use this Slate design if you were [1488] trying to do that, would you?

A. Outside of the cylinder, it is my opinion that the cylinder and piston and what takes place there, and the cap—it is my opinion that the same result could be gotten much more simply and effectively.

(Testimony of William Howard Clapp)

Q. Let us confine ourselves then to what is shown on the third sheet of the drawings. That is what you include in your last answer and that eliminates what you say you would reject, isn't that correct?

A. You want me to re-design the machine?

Q. Oh, no. I want you to tell us whether you would have to re-design this machine if you were going to recommend it for the practical manufacture of dry ice blocks.

Mr. Foster: Which is objected to as immaterial as to the recommendation. He has testified as to the possibilities.

The Court: Well, I think the form of the question may be unfortunate. As I understand it, Professor, the question is this: Take Figs. 5 to 8, both inclusive, of this Slate patent '590; what changes would you have to make in those pieces of apparatus in order to use it commercially for making dry ice? A. Figs. 5 to 8?

The Court: That is what I understood by your question.

Mr. L. S. Lyon: Yes; that is correct, your Honor.

A. Well, nothing is shown in Figs. 5 to 8 as to how the closure cap is to be opened under pressure. [1489]

The Court: That is right. You would have to supply something to take care of that, or abandon it, wouldn't you?

A. Yes, sir. The patent discloses that other means may be employed to lower the pressure along the line of stroke other than the outlet 28, and such other means might be desirable.

(Testimony of William Howard Clapp)

Q. By Mr. L. S. Lyon: You think it would be desirable to have some kind of a closure at the top of the chamber?

A. No; because the patent discloses that the piston makes a sealed connection when the cap is closed, so that this position between the piston and the cap is a closed chamber.

Q. You have heard the testimony here that in the Cole and McLaren patent press or apparatus and in the defendants' apparatus it is necessary to allow a clearance around the piston; have you heard that testimony?

A. I have not heard any of the testimony on the patent in suit.

Q. What is your understanding as to the Cole and McLaren patent as to the plunger in Fig. 5; do you understand that there must be a clearance around that plunger for the passage of gas?

The Court: Here it is right here (indicating exhibit).

A. In the description of the patent under the modified apparatus shown in Figs. 5 and 6, this plunger fits loosely in chamber 100 to permit gases to pass as it descends. [1490]

Q. By Mr. L. S. Lyon: Have you sufficient knowledge to tell us of what importance that is in the practical operation of the machine?

A. I think I should have made that clear when I stated in the Slate patent that other means for escape of gas should be provided.

Q. You would have to have some outlet for gas somewhere between the closure head 8 and the piston, would you not, to operate the Slate device satisfactorily?

A. During the compression stroke of the piston?

(Testimony of William Howard Clapp)

Q. Yes. A. Yes.

Q. What kind of a device would you have that would be an opening or a vent during the compression stroke and yet would not be a vent during the time the CO² is propelling that piston upward in the chamber in the Slate patent?

A. He evidently had in mind, I gathered, a multitude or a number of port openings along the wall of the cylinder.

Q. You would not want the chamber vented to the atmosphere during the operation on which the expansion of the CO² is driving the piston upward, would you, in this Slate device; you could not put up with that?

A. No; not vented to the atmosphere.

Q. You would not want any vent at all if you were going to use the energy of the expanded gases to drive the piston up, isn't that correct? [1491]

A. Well, there would be that much less, that much less or lower pressure, perhaps, on the piston. It would depend on the pressure in the exit source there for those gases.

Q. I understand your testimony quite correctly, in my opinion, saying you have got to put some kind of a vent between that closure head 8 and that piston to relieve the chamber of gases during the pressing? A. Yes.

Q. What I can't understand is how you are going to have it in there and not lose your gas at that vent when you are trying to drive the piston up with those gases. Can you tell me that?

A. Well, it might be a valve which would be closed on the upstroke and open on the downstroke.

Q. There is no such thing described in this Slate patent? A. No. It says "other means".

(Testimony of William Howard Clapp)

Q. Does it say there is to be any other means down below the level of the openings 28, anywhere in the patent?

The Witness: I have lost my patent now.

Mr. L. S. Lyon: Well, I have lost mine two or three times.

The Court: 18.

The Witness: This was the British Slate, wasn't it?

Mr. Foster: No. This was the U. S. Slate, 1,643,590. I believe, that Mr. Lyon was inquiring about.

The Witness: I am sorry. [1492]

Mr. L. S. Lyon: It is Exhibit EE-18, Doctor, if you have yours numbered that way. I can show you.

Mr. Foster: No. He doesn't have the tab numbers, Mr. Lyon.

A. Yes; I have read that paragraph.

Mr. Foster: Could the witness point out what he is referring to in the answer for the purpose of the record?

A. Commencing with line 96 on page 3: "The phrase 'reducing pressure in the chamber' as used in the succeeding claims is to be construed broadly as applying to any operative method and means for relieving or reducing the pressure on liquid carbon dioxide supplied to a chamber under pressure, whether by utilizing the energy of the expansion of gas from the liquid in a pressure chamber to drive or to continue to drive a movable element such as a piston and thus increase the capacity of such a chamber or whether by other means (not illustrated) for releasing or reducing pressure in the chamber into which the liquid carbon dioxide is conducted under pressure, such as a valve controlled passage adapted to be opened to allow the portion of the liquid carbon dioxide which vaporizes to escape rapidly from the chamber while the remaining portion is refrigerated to snow."

(Testimony of William Howard Clapp)

Q. By Mr. L. S. Lyon: That clause is referring to the operation during snowing, is it not, and not during the pressing? [1493]

A. The patent does not state so.

Q. I thought it did, when it says "while the remaining portion is refrigerated to snow." Isn't that speaking of the snowing stage?

A. Yes. Those openings, hypothetical openings are certainly working when the snowing operation is going on. That would be during the upstroke of the piston.

Q. And it don't say where they are in this patent?

A. No, no.

Q. And there isn't any statement in the patent that there is to be any vent for the gas between the piston and the chamber closure plate 8 during the pressing operation, is that correct?

A. No; the patent does not specifically state where those openings are to be placed.

Q. Professor, as a mechanical engineer, could you approve attempting to operate an apparatus for manufacturing solid CO² blocks with a piston moving in a cylinder such as shown in this Slate patent with the piston in sealing-tight contact with the inner wall of the chamber?

A. I would have to see the provision that was made following the description given in the lines which we have just read before I gave approval to it.

Q. There would be a tendency in an apparatus of this kind when the plate 8 was open at the bottom and atmosphere could gain access to the inner side of the chamber for [1494] moisture to condense and freeze on the inner wall of the chamber, would there not?

A. As I gather your question, you are referring to the moisture coming in at the top of the cylinder?

(Testimony of William Howard Clapp)

Q. No; at the bottom, at the bottom when you open the plate 8. There would be some moisture, some air, and almost all air excepting maybe in some parts of San Diego County carry moisture?

A. Yes; there would be that tendency.

Q. And, as a mechanical engineer, how long do you say the piston could operate under those conditions and maintain its sealing contact with the wall of the chamber? Wouldn't it wear out?

A. Steam engines run for years with moisture around the piston without any attention to the rings.

Q. There would also be the moisture, this same moisture at the top of the piston and following the piston down there would be air admitted to the chamber, would there not?

A. Yes, sir.

Q. I am going to ask you one question and if you can't answer it, perhaps you would make a calculation for us tonight. I will ask you if you have made any calculation to determine how tall this Slate device would have to be to operate theoretically as described in the patent and without any added source of power; and I will give you a suggested answer: 240 feet high, and ask you if you can make the [1495] calculation and tell us whether that is right or not in the morning.

Mr. Foster: Well, that is objected to, your Honor, as being a hypothetical question and having no true basis of fact, because, as Professor Clapp has pointed out, the patent states that it can rely, or the patent does not state that it relies entirely upon the expansion of gas for its energy.

The Court: If counsel wants the Professor to make any calculations, he can make him his witness and pay him for it, otherwise he does not have to do it.

(Testimony of William Howard Clapp)

Mr. L. S. Lyon: I know he doesn't have to, but I thought maybe he would.

The Court: That is up to him.

The Witness: If you will give me some figures on the friction in the mechanism, and the diameter of the piston, etc., conditions under which the liquid is let in, I think I could make some calculations that might be approximately correct.

Q. By Mr. L. S. Lyon: Can you state—

The Court: Let us call it a day. I think it is about time. We will adjourn until 10:00 o'clock tomorrow morning.

(Whereupon an adjournment was taken until 10:00 o'clock a. m. the following day, Thursday, May 25, 1944.)
[1496]

Los Angeles, California, Thursday, May 25, 1944;
10:00 a. m.

(Parties present as last noted.)

The Court: You may proceed.

WILLIAM HOWARD CLAPP,

recalled.

Cross-Examination

resumed.

Q. By Mr. L. S. Lyon: Professor, taking up again this Slate patent No. 1,643,590 which we were discussing at the adjournment last night, the intended operation of the apparatus as shown and described in that patent is that a block shall be completed for each cycle of the piston; is that not correct?

A. One would infer it from the illustrations, but I do not recall that statement in the text.

(Testimony of William Howard Clapp)

Q. What is your understanding of the operation intended by the patent in that respect?

A. My understanding is that we have an injection period during the upstroke of the piston, snowing in the chamber during the upstroke, escape of the carbon dioxide gas, and compression of the snow on the downward stroke and ejection of the snow. [1497]

* * * * *

Mr. L. S. Lyon: I did not intend to quote his testimony. What I am asking the witness to answer is, that assuming there is no belt applying power to the so-called fly-wheel, the energy to drive the piston to compress the solidified CO₂ must come from the momentum of the fly-wheel, is that correct?

The Court: I think that question is perfectly proper.

A. Yes, sir. Yes, sir; it is correct.

The Court: Let me call your attention, Professor, to page 3 in connection with that last question, page 3. line 60: "The piston 18 when in the position shown in Fig. 7 is ready to start on its return or downward stroke and continue downward driven by the force of the energy stored in the fly-wheel 52, to about the position shown in Fig. 8. At this [1499] stage of the operation of the machine the pressure of the compressed cake of solid carbon dioxide on sealing cap 12 and cap applying member 8 will throw the toggle joint 54 of members 42 and 43 off center and discharge the compressed cake of carbon dioxide as shown in Fig. 5. The process and cycle of operation above described will then be repeated, with a resultant compression of carbon dioxide snow into a compact solid mass which is ejected from the converting chamber at the end of each cycle."

(Testimony of William Howard Clapp)

A. Yes; it does say "at the end of each cycle." I stand corrected, sir.

Q. By Mr. L. S. Lyon: Based on your engineering knowledge, Professor, can you tell us how many cycles per minute, or approximate the number of cycles per minute or per hour at which this device could function or would function?

A. No; it would be—there are too many variables. The rate of evaporation of liquid CO₂, the rate of injection of liquid CO₂, the friction in all of this linkage, would be factors influencing the rate of travel of the piston.

Q. Have you answered the question?

A. Yes, sir.

Q. Assuming a block of a height of 10 inches, and a temperature for the liquid CO₂ of approximately minus 50 degrees of the liquid CO₂ in the feed into the device, what would the cycle rate be in this machine, or approximately what would it be? [1500]

Mr. Foster: I object to the question as vague and indefinite, your Honor, in that there are factors mentioned by the witness, which are not contemplated by this question.

The Court: I don't think that question, hypothetical or otherwise, has to include all of the elements. If you can't answer as to the rest of them, you just say so.

A. We are injecting a certain amount of liquid carbon dioxide at minus 50 degrees?

Q. By Mr. L. S. Lyon: CO₂ at minus 50 degrees.

A. That would be a gas then.

Q. Liquid CO₂? A. Not minus 50 degrees.

(Testimony of William Howard Clapp)

Q. At a temperature of minus 50 degrees?

A. It would depend upon the pressure conditions, yes, that is right. I stand corrected.

Q. That is, as I understand, the ordinary commercial temperature for liquid CO₂ that is fed into commercial machines, where the temperature of the liquid is about minus 50 degrees? A. Yes.

Q. I am assuming that temperature of the liquid CO₂.

A. That would correspond, perhaps, to a pressure at injection of several hundred pounds, maybe.

Q. You can assume that the block that is going to be made is, say, 10 inches high. Can you approximate the cycle rate that the machine would have to function at? [1501] A. No.

Mr. Miketta: I object to the question as incomplete. The height of the block is given, but not its diameter. No basis of measurement exists for the assumption.

Mr. L. S. Lyon: I think the Professor would agree that Mr. Miketta would have to flunk his course in mechanics. I don't think the area of the block would make any difference.

The Court: It is completed at every cycle. For the purpose of the question I don't think it would make much difference. You may answer, if you can.

A. The pressure on the piston is going to depend upon the area of the piston, and then the rate at which it moves is going to be controlled by the weight of the parts to be lifted, by the friction in the mechanism, but probably most of all, by the weight of that fly-wheel, its moment of inertia, and resistance that it gives to accelerating under the applied force under the piston.

Q. By Mr. L. S. Lyon: Perhaps we can get at it this way: You are asked to lay out this machine so as

(Testimony of William Howard Clapp)

to make a block 10 inches deep, and for that matter, let us say 10 inches across; it is square. You would have to start somewhere, and you would have to decide what weight would be in the fly-wheel, wouldn't you, for one thing? [1502] A. That would be one thing.

Q. What do you think, as a designer, the weight of that fly-wheel should be to make that block in that machine?

A. That would depend entirely upon what rate you wished this piece of apparatus to travel at.

Q. At what rate do you think you could design it at to travel satisfactorily, if at all?

A. I think that is asking a great deal of me. Certainly, to perform its functions it should travel quite slowly. Anything I give would be just a guess. I don't think it would be worth anything.

Q. Do you think it would be one revolution per minute, or one revolution per hour, or what is your best guess?

Mr. Miketta: If the court please, I think this line of questions has gone far enough. The validity of the Slate patent is not before your Honor. The only patent whose validity is in question is that of the patent in suit. The prior patent shows a certain structure. That structure, as it pertains to the claims and the subject matter before your Honor is of interest, but the validity of the Slate patent is not in issue.

The Court: I don't believe the objection is sound. I think the question is proper from that standpoint, but I think it is surplusage, because he has already said it would be a pure guess. Why should we bother with conjecture?

(Testimony of William Howard Clapp)

Once an hour wouldn't be any better than once a [1503] minute.

Mr. L. S. Lyon: I am inclined to agree with your Honor.

Q. Can you tell us how high you would design this chamber to make such a block in this machine?

A. Oh, judging by the proportions shown here in Figure 1, and assuming that you had a 10-inch square cylinder area, perhaps 8 or 9 or 10 feet high.

Q. Are you prepared to state that with the chamber only 9 or 10 feet high such a block could be produced in this machine? A. No, I don't know.

Q. I am told that the chamber would have to be 240 feet high to make such a block. Do you know whether that is right or not?

A. I think it is based on a whole lot of assumptions. No, I would not be prepared to believe it at all.

Q. Do you know it's wrong?

A. It depends on your assumptions.

Q. I am assuming a 10-inch block in height, and liquid fed at minus 50 degrees, and a proper-sized fly-wheel, are you prepared to say that I am wrong when I say the height of the chamber would have to be approximately 240 feet? A. I would have to be shown, sir.

Q. Are you prepared to say that the statement is wrong? If you are not prepared one way or the other, that [1504] is all I want to know.

A. I think it could be 240 feet, or it might be 120 feet or even less.

Q. You don't know what it would be?

A. No, I don't grant that there is any fixed height there.

(Testimony of William Howard Clapp)

Q. What effect does the height of that chamber have on the operation?

A. I think I see what you are getting at. We are letting in enough liquid so that when it boils we must have room enough to hold the gas that is evolved at such pressure, at the upward stroke. Supposing that the gas was not exhausted until the piston had reached the limits of its stroke. That pressure would vary all the way. It would be dependent very much upon the size of the fly-wheel. It would not be a uniform pressure. We would be having variable acceleration. It is quite a complicated problem; a whole lot of hypotheses in here that makes the whole thing seem to me rather ridiculous, Mr. Lyon.

Q. What is ridiculous? The scheme in that patent is ridiculous, isn't it, from an engineering standpoint?

A. I said yesterday I thought the same results could be accomplished in a simpler, more direct manner.

Q. When you consider these factors we are considering here now, it becomes apparent to you, as an engineer, that the proposal in this Slate patent is a ridiculous proposal, [1505] on the assumption that the energy to drive the piston down to compress the snow must be derived from the momentum of the fly-wheel; isn't that correct?

A. I think you are putting words into my mouth.

Q. I am willing to do that, if you will accept them.

The Court: Read the question.

(Question read by the reporter.)

The Court: Interpreting the word "ridiculous" to be impractical from an engineering standpoint, you may answer.

A. Yes. Your assumption would have no belt drive?

(Testimony of William Howard Clapp)

The Court: Yes.

A. Yes, I think it would be ridiculous.

The Court: One further question: If you were starting out to build a device, back in the early twenties, and had these various disclosures in the prior art, you would not pay much attention to this particular device, if you were going to build a machine?

A. I would not give it a second glance.

The Court: That is about what I thought. [1506]

Q. By Mr. L. S. Lyon: Will you turn now to the patent to Josephson, No. 1,659,431, No. EE-19? This apparatus is specially designed for producing solidified CO₂ by the application of external refrigeration as distinguished from the self-evaporative method, isn't that correct?

A. The apparatus is designed to freeze liquid carbon dioxide from liquid to solid without evaporation to snow.

Q. What would you have to do to this apparatus if you wanted to use it to produce solid CO₂ by the evaporative method?

A. Well, one would run into these tanks through line 40 and valve 40a a certain amount of liquid carbon dioxide. He would then close those valves and open the exhaust valve 51, I believe it is, with outlet on pipe 53, and while that gas is supposed to go back into the system, there is no definite showing as to just how it goes back. It could be exhausted to the air, of course. We would then snow in that chamber. Does that answer the question?

Q. What parts would you have to remove or get out of the way for such an operation?

A. I don't see that you would have to remove anything.

(Testimony of William Howard Clapp)

Q. In this apparatus as it is shown in the patent drawing and described in this Josephson patent, the gas outlet does not function to withdraw gas while converting from liquid to solid CO_2 ; that is correct, isn't it?

The Witness: Would you read the question, please?
[1507]

(Question read by the reporter.)

The Witness: "while converting" what?

(Last part of the question again read by the reporter.)

A. In the normal operation of the device the cylinder 41 is filled with liquid CO_2 , with the valve 51 open. so that the gas can escape, and then valve 51 is closed and—

Q. And while the freezing is going on in the intended operation of this patent there is no gas being withdrawn; that is correct, isn't it?

The Witness: What being withdrawn?

The Reporter: Gas being withdrawn.

A. During the freezing operation; that is correct.

Q. By Mr. L. S. Lyon: And this arrangement in this patent is not so designed as to permit a gas withdrawal during a snowing operation; it would have to be modified and changed; that is correct, isn't it?

A. No; I don't see that any modification would have to be made in the pipes and valves. There would be a modification in their operation.

Q. What would you have to change?

A. I have already stated how one might inject liquid carbon dioxide and produce CO_2 snow in the chamber by the operation of the valves.

Q. Have you any knowledge or experience, Professor, with apparatus in which liquid CO_2 is solidified by freez-

(Testimony of William Howard Clapp)

ing, such as the type of operation described and proposed in this patent? [1508] A. No, sir.

Q. You never saw an apparatus designed to operate in that way commercially? A. No, sir.

Q. Are you able to tell us, based on your engineering knowledge, within what range of dimensions this device would be built for practical operation?

A. I should say that those cylinders should be such that we could freeze ice blocks of the size required in commerce.

Q. In a practical operation how would these blocks be removed from these cylinders or chambers according to this patent?

A. According to this patent the walls are made slightly tapering, we have a quickly removable cover, breech-block type, and it is entirely possible to put a little pressure on top of the block through the inlet valve 40a, if necessary, to shove out the block.

Q. What size or dimension of block do you think you could produce or handle practically in that way, do you know?

A. I don't think there would be much of any limit. You certainly could make a 10 x 10 block in there if you wished.

Q. And you would have no difficulty in removing it?

A. No; I don't see why.

Q. You have stated on your direct examination that a plunger might be added to this device. Will you consider now [1509] the position of the inlet and the outlet as shown in the device and tell us if such would not have to be modified if you attempted to add a plunger?

